

Service  
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# Service Manual

Horizontal Frequency

30-83 KHz

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## SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING

## Revision List

## Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all AOC Company Equipment. The service procedures recommended by AOC and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. AOC could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, AOC has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by AOC must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

Hereafter throughout this manual, AOC Company will be referred to as AOC.

### **WARNING**

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from AOC. AOC assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.

### FOR PRODUCTS CONTAINING LASER:

DANGER-Invisible laser radiation when open AVOID DIRECT EXPOSURE TO BEAM.

CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with backlight unit

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body is grounded through wristband.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

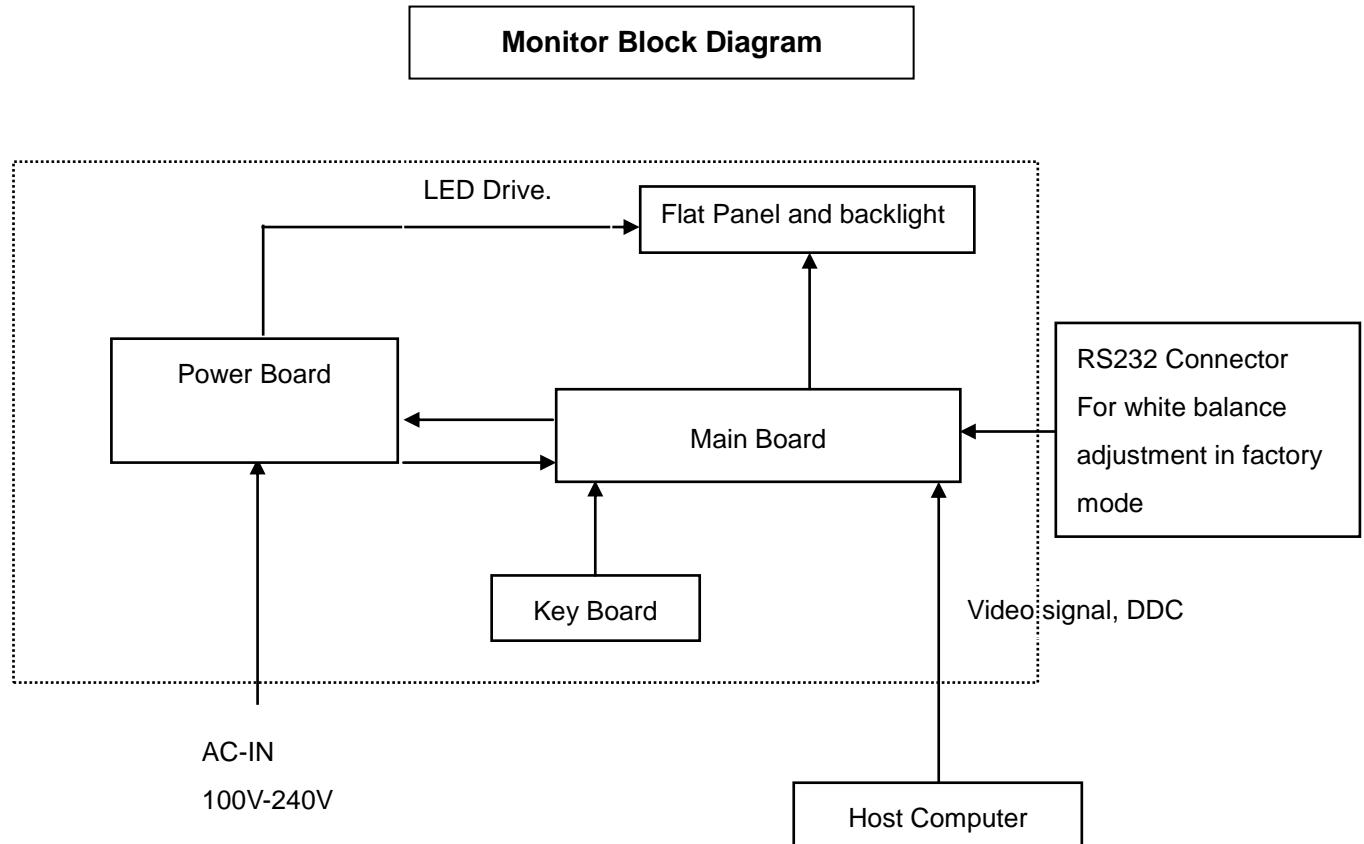
## 1. Monitor Specifications

Panel	Model name	E2060SWDA/ E2060PWDA /E2060Sw/E2060SWD
	Driving system	TFT Color LCD
	Viewable Image Size	49.5cm diagonal
	Pixel pitch	0.27mm(H)X0.27mm(V)
	Video (E2060SWDA/ E2060PWDA/E2060SWD)	R, G, B Analog Interface & Digital Interface
	Video (E2060Sw)	R, G, B Analog Interface
	Separate Sync.	H/V TTL
	Display Color	16.7M Colors
	Dot Clock	108MHz
Resolution	Horizontal scan range	30 kHz - 83 kHz
	Horizontal scan Size(Maximum)	432mm
	Vertical scan range	50 Hz - 76 Hz
	Vertical scan Size(Maximum)	239.76mm
	Optimal preset resolution	1600x900@60Hz
	Plug & Play	VESA DDC2B/CI
	Input Connector (E2060SWDA/ E2060PWDA/E2060SWD)	D-Sub 15pin; DVI 24pin
	Input Connector (E2060Sw)	D-Sub 15pin;
	Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM, TMDS
	Power Source	100-240V~, 50/60Hz
	Power Consumption	Active: 23 W (typical)
		Standby < 0.5 W
Physical Characteristics	Off timer	0-24 hrs
	Speakers(E2060SWDA/ E2060PWDA)	2WX2
	Connector Type (E2060SWDA/ E2060PWDA/E2060SWD)	15-pin Mini D-Sub DVI-D
Environmental	Connector Type (E2060Sw)	15-pin Mini D-Sub
	Signal Cable Type	Detachable
	Temperature:	
Environmental	Operating	0° to 40°
	Non-Operating	-25° to 55°
	Humidity:	
	Operating	10% to 85% (non-condensing)
	Non-Operating	5% to 93% (non-condensing)
	Altitude:	
	Operating	0~ 3658m (0~ 12000 ft )
	Non-Operating	0~ 12192m (0~ 40000 ft )

## 2. LCD Monitor Description

The LCD monitor will contain a main board, a power board, a key board which house the flat panel control logic, brightness control logic and DDC.

The power part will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.



### 3. Operating Instructions

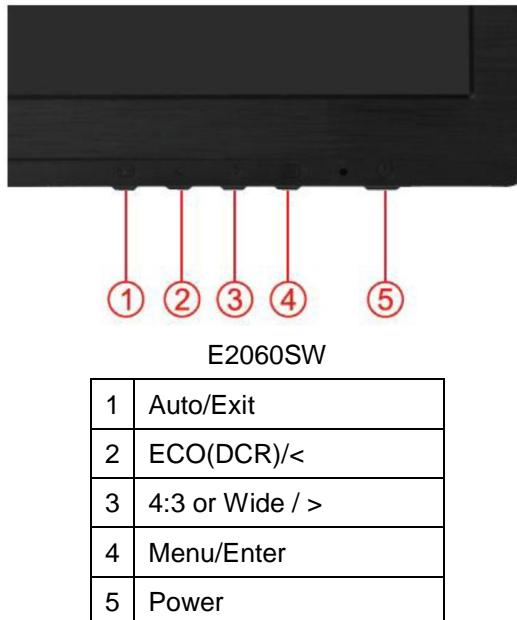
#### 3.1 General Instructions

This monitor only has one external control function button; press the Power/Auto Configuration button to turn the monitor on or off.

If you need to adjust other functions, please visit the official AOC website ([www.aoc.com](http://www.aoc.com)) to download and install AOC's exclusive i-Menu application software, and then perform related function adjustments to get the screen you require.

- Connect the power cord properly.
- Connect the signal cable onto the PC's graphics card.
- Push the button to start the monitor, and the power indicator will light up..

#### 3.2 Control Buttons



##### Power

Press the Power button to turn on/off the monitor.

##### Eco (DCR)/<

Press the Eco key continuously to select the Eco mode of brightness and DCR on when there is no OSD. (Eco mode hot key may not be available in all models).

##### Volume / >

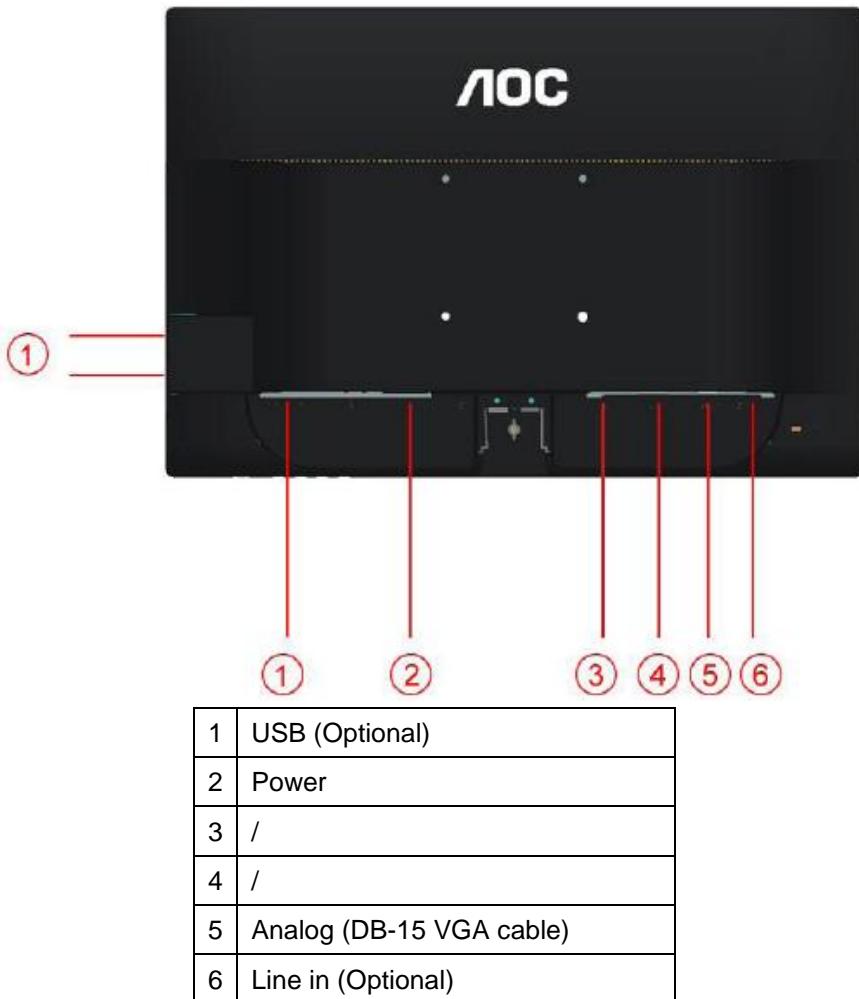
When there is no OSD, Press Volume button to active volume adjustment bar, Press < or + to adjust volume(Only for the models with speakers)

##### Auto / Exit

When there is no OSD, press Auto/Source button continuously about 3 second to do auto configure .

##### Source hot key

When the OSD is closed, press Source button will be Source hot key function. Press Source button continuously to select the input source showed in the message bar , press Menu/Enter button to change to the source selected



To protect equipment, always turn off the PC and LCD monitor before connecting.

1. Connect the power cable to the AC port on the back of the monitor.
2. Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.
3. (Optional) Connect the audio cable to audio in port on the back of the monitor
4. Turn on your monitor and computer.

If your monitor displays an image, installation is complete. If it does not display an image, please refer to Troubleshooting.

### 3.3 OSD Setting

Basic and simple instruction on the control keys.



- 1) Press the  **MENU-button** to activate the OSD window.
- 2) Press < or > to navigate through the functions. Once the desired function is highlighted, press the  **MENU-button** to activate it. Press < or > to navigate through the sub-menu functions. Once the desired function is highlighted, press  **MENU-button** to activate it.
- 3) Press < or > to change the settings of the selected function. Press AUTO to exit. If you want to adjust any other function, repeat steps 2-3.
- 4) OSD Lock Function: To lock the OSD, press and hold the  **MENU button** while the monitor is off and then press  **power button** to turn the monitor on. To un-lock the OSD - press and hold the  **MENU button** while the monitor is off and then press  **power button** to turn the monitor on.

#### Notes:

- 1) If the product has only one signal input, the item of "Input Select" is disable to adjust.
- 2) If the product screen size is 4:3 or input signal resolution is wide format, the item of "Image Ratio" is disable to adjust.
- 3) One of DCR, Color Boost, and Picture Boost functions is active, the other two function is turned off accordingly.

## Luminance



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Luminance), and press **MENU** to enter.

3 Press < or > to select submenu, and press **MENU** to enter.

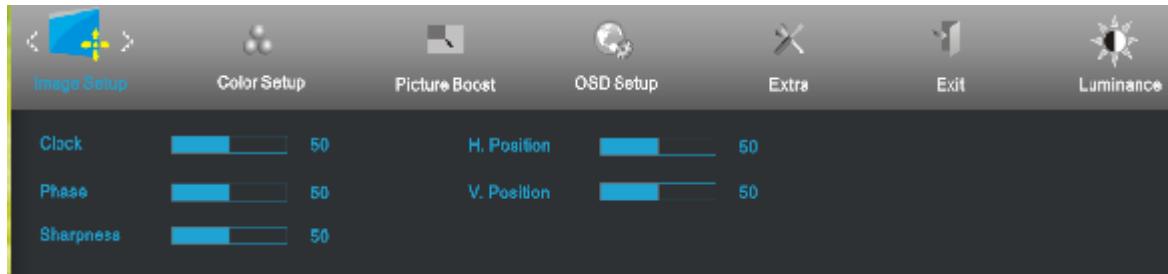
4 Press < or > to adjust.

5 Press **AUTO** to exit.



	Brightness	0-100	Backlight Adjustment
	Contrast	0-100	Contrast from Digital-register.
Eco mode	Standard		Standard Mode
	Text		Text Mode
	Internet		Internet Mode
	Game		Game Mode
	Movie		Movie Mode
	Sports		Sports Mode
Gamma	Gamma1		Adjust to Gamma1
	Gamma2		Adjust to Gamma 2
	Gamma3		Adjust to Gamma 3
DCR	Off		Disable dynamic contrast ratio
	On		Enable dynamic contrast ratio
Overdrive	Weak		Adjust the response time (only for E2260PHU/E2260SHU/ E2460PWHU/E2460SWHU/E2460SHU/E2460PHU)
	Medium		
	Strong		
	Off		
i-Care	On		adjusts the brightness according to light intensity (only for E2260PHU/E2260SHU/ E2460PWHU/E2460SWHU/E2460SHU/E2460PHU)
	Off		

## Image Setup



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Image Setup), and press **MENU** to enter.

3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Clock	0-100	Adjust picture Clock to reduce Vertical-Line noise.
	Phase	0-100	Adjust Picture Phase to reduce Horizontal-Line noise
	Sharpness	0-100	Adjust picture sharpness
	H.Position	0-100	Adjust the horizontal position of the picture.
	V.Position	0-100	Adjust the vertical position of the picture.

## Color Setup



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Color Setup), and press **MENU** to enter.

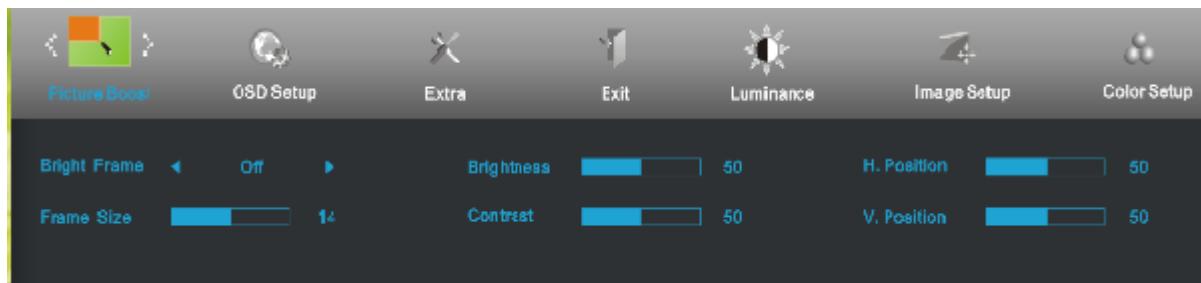
3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Color setup.	Warm		Recall Warm Color Temperature from EEPROM.
		Normal		Recall Normal Color Temperature from EEPROM.
		Cool		Recall Cool Color Temperature from EEPROM.
		sRGB		Recall SRGB Color Temperature from EEPROM.
		User	Red	Red Gain from Digital-register
			Green	Green Gain Digital-register.
			Blue	Blue Gain from Digital-register
	DCB Mode	Full Enhance	on or off	Disable or Enable Full Enhance Mode
		Nature Skin	on or off	Disable or Enable Nature Skin Mode
		Green Field	on or off	Disable or Enable Green Field Mode
		Sky-blue	on or off	Disable or Enable Sky-blue Mode
		AutoDetect	on or off	Disable or Enable AutoDetect Mode
	DCB Demo		On or off	Disable or Enable Demo

## Picture Boost



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Picture Boost), and press **MENU** to enter.

3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Frame Size	14-100	Adjust Frame Size
	Brightness	0-100	Adjust Frame Brightness
	Contrast	0-100	Adjust Frame Contrast
	H. position	0-100	Adjust Frame horizontal Position
	V.position	0-100	Adjust Frame vertical Position
	Bright Frame	on or off	Disable or Enable Bright Frame

## OSD Setup



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (OSD Setup), and press **MENU** to enter.

3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	H.Position	0-100	Adjust the horizontal position of OSD
	V.Position	0-100	Adjust the vertical position of OSD
	Timeout	5-120	Adjust the OSD Timeout
	Transparence	0-100	Adjust the transparency of OSD
	Language		Select the OSD language

## Extra

 Extra	Exit	 Luminance	 Image Setup	 Color Setup	 Picture Boost	 OSD Setup
Input Select	◀ Auto ▶		Image Ratio	◀ 4:3 ▶	Resolution: 1024 (H) X768 (V)	
Auto Config.	◀ Yes ▶		DDC/CI	◀ Yes ▶	H. Frequency: 60KHz	
Off Timer	◀ 00 ▶		Reset	◀ No ▶	V. Frequency: 60Hz	

1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Extra), and press **MENU** to enter.

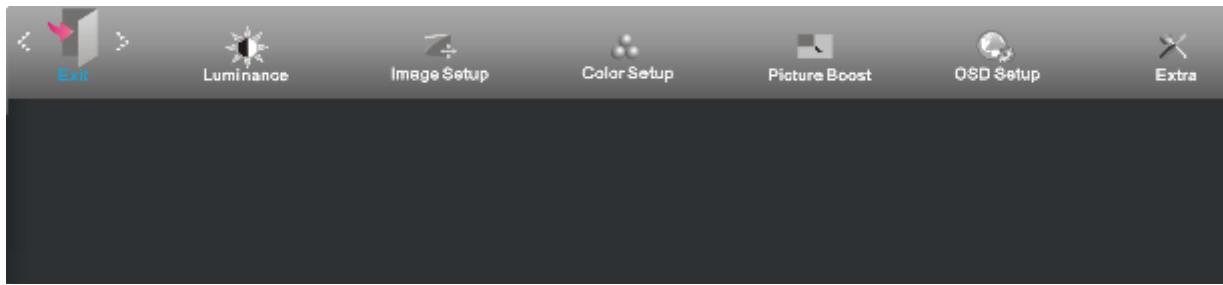
3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Input Select	Auto / Analog / DVI / HDMI	Select input signal source. ( E2260PHU/E2260SHU/ E2460PWHU/E2460SWHU/E2460SHU/E2460PHU)
	Input Select	Auto / Analog / DVI	Select input signal source. (E960SRDA/ E960PRDA E2060SWDA/E2060PWDA/ E2060SWD/ E2260SD/ E2260SDA/ E2260PDA)
	Input Select	Analog	Select input signal source. (E2060SW)
	Auto Config	yes or no	Auto adjust the picture to default.
	Off timer	0-24hrs	Select DC off time.
	Image Ratio	wide or 4:3	Select wide or 4:3 format for display.
	DDC-CI	yes or no	Turn ON/OFF DDC-CI Support.
	Reset	yes or no	Reset the menu to default.
	Information		Show the information of the main image and sub-image source.

## Exit



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Exit), and press **MENU** to enter.

3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Exit		Exit the main OSD
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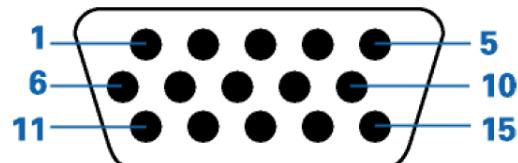
## LED Indicator

Status	LED Color	
Full Power Mode	Green or Blue	
Active-off Mode	Orange or red	

## 4. Input/Output Specification

### 4.1 Input Signal Connector

#### Pin Assignments



Pin Number	15-Pin Side of the Signal Cable
1	Video-Red
2	Video-Green
3	Video-Blue
4	N.C.
5	Detect Cable
6	GND-R
7	GND-G
8	GND-B
9	+5V
10	Ground
11	N.C.
12	DDC-Serial data
13	H-sync
14	V-sync
15	DDC-Serial clock

## 4.2 Factory Preset Display Modes

STAND	RESOLUTION	HORIZONTAL FREQUENCY(kHZ)	VERTICAL FREQUENCY(Hz)
VGA	640×480 @60Hz	31.469	59.940
VGA	640×480 @67Hz	35.000	66.667
VGA	640×480 @72Hz	37.861	72.809
VGA	640×480 @75Hz	37.500	75.000
Dos-mode	720×400 @70Hz	31.469	70.087
SVGA	800×600 @56Hz	35.156	56.250
SVGA	800×600 @60Hz	37.879	60.317
SVGA	800×600 @72Hz	48.077	72.188
SVGA	800×600 @75Hz	46.875	75.000
SVGA	832×624 @75Hz	49.725	74.500
XGA	1024×768 @60Hz	48.363	60.004
XGA	1024×768 @70Hz	56.476	70.069
XGA	1024×768 @75Hz	60.023	75.029
SXGA	1280×1024 @60Hz	63.981	60.020
SXGA	1280×1024 @75Hz	79.976	75.025
WSXGA	1600×900 @60Hz	55.540	59.978

## 4.3 Panel Specification

### 4.3.1 General Features

M195FGE-L20 is a 19.5" TFT Liquid Crystal Display module with WLED Backlight unit and 30 pins 2ch-LVDS interface. This module supports 1600 x 900 HD+ mode and can display up to 16.7M colors. The converter module for Backlight is not built in.

### 4.3.2 Display Characteristics

Item	Specification	Unit
Screen Size	19.5" real diagonal	
Driver Element	a-si TFT active matrix	-
Pixel Number	1600 x R.G.B. x 900	pixel
Pixel Pitch	0.27 (H) x 0.27 (V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.7M	color
Transmissive Mode	Normally white	-
Surface Treatment	AG type, 3H hard coating, Haze 25	-
Luminance, White	250	Cd/m2
Color Gamut	72% of NTSC(Typ.)	-
ROHS, Halogen Free & TCO 5.2	ROHS, Halogen Free TCO 5.2 compliance	
Power Consumption	Total 14.154 W (Max.) @ cell 3.75 W (Max.), BL 10.404 W (Max.)	

Item	Min.	Typ.	Max.	Unit
Module Size	Horizontal (H)	451.5	452.0	452.5
	Vertical (V)	262.5	263.0	263.5
	Thickness (T)	-	10.5	11
Bezel Area	Horizontal	434.8	435.3	435.8
	Vertical	242.56	243.06	243.56
Active Area	Horizontal	-	432.0	-
	Vertical	-	239.76	-
Weight	-	1430	1500	g

### 4.3.3 Electrical Characteristics

TFT LCD MODULE

Vcc = 5.0 V, Ta = 25 ± 2 °C, Fr = 75Hz

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Power Supply Voltage	Vcc	4.5	5	5.5	V
Ripple Voltage	V <sub>RP</sub>	-	-	300	mV
Rush Current	I <sub>RUSH</sub>	-	-	3	A
Power Supply Current	White		0.5	0.6	A
	Black		0.65	0.75	A
	Vertical Stripe		0.65	0.75	A
Power Consumption	PLCD				Watt
LVDS differential input voltage	V <sub>id</sub>	100	-	600	mV
LVDS common input voltage	V <sub>ic</sub>	1.0	1.2	1.4	V
Logic High Input Voltage	V <sub>IH</sub>	-	-	0.1	V
Logic Low Input Voltage	V <sub>IL</sub>	-0.1	-		V

#### Back Light Unit

T<sub>a</sub> = 25 ± 2.0°C

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED Light Bar Input Voltage Per Input Pin	V <sub>PIN</sub>	---	31	34	V	(1), Duty=100%, IPIN=80mA
LED Light Bar Current Per Input Pin	I <sub>PIN</sub>		65	69	mA	(1), (2) Duty=100%
LED Life Time	L <sub>LED</sub>	50000			Hrs	(3)
Power Consumption	P <sub>BL</sub>	---	8.06	8.84	W	(1) Duty=100%, IPIN=80A

#### 4.3.4 Optical Characteristics

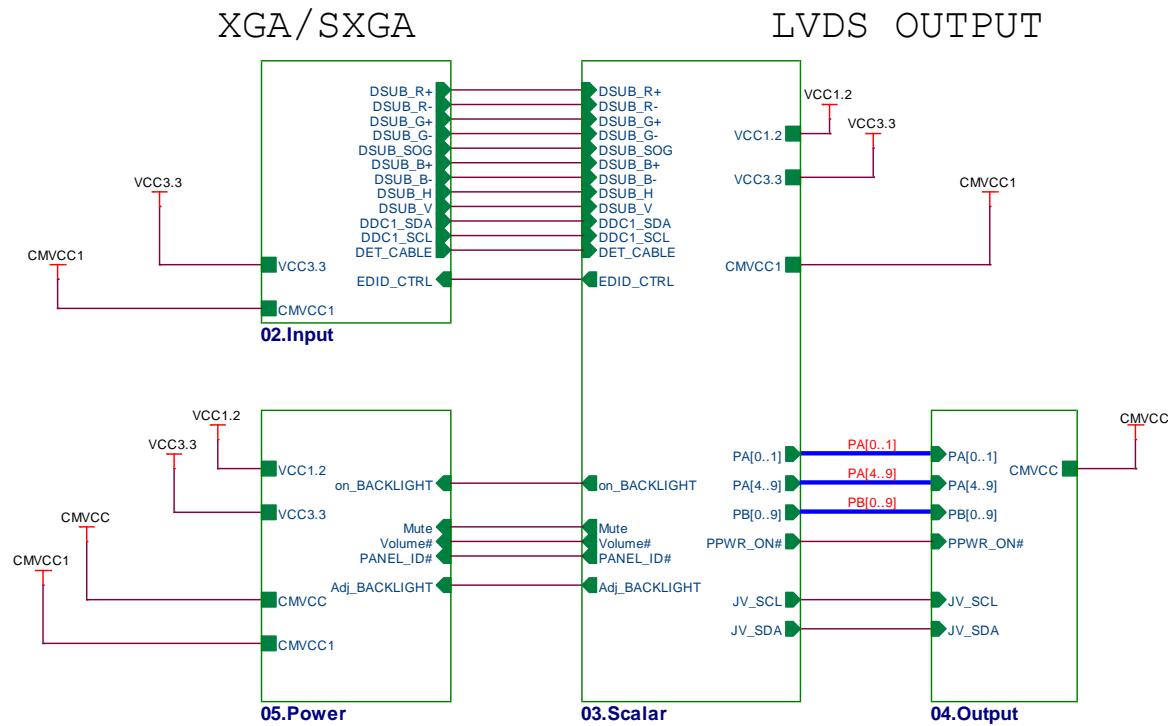
Item		Symbol	Condition	Min.	Typ.	Max.	Unit	
Color Chromaticity (CIE 1931)	Red	R <sub>x</sub>	θ <sub>x</sub> =0°, θ <sub>y</sub> =0° CS-2000 R=G=B=255 Gray scale	Typ - 0.03	0.641	Typ + 0.03	-	
		R <sub>y</sub>			0.338			
	Green	G <sub>x</sub>			0.315			
		G <sub>y</sub>			0.629			
	Blue	B <sub>x</sub>			0.159			
		B <sub>y</sub>			0.059			
	White	W <sub>x</sub>			0.313			
		W <sub>y</sub>			0.329			
Center Luminance of White (Center of Screen)		L <sub>c</sub>		200	250	-	cd/m <sup>2</sup>	
Contrast Ratio		CR		700	1000	-	-	
Response Time	T <sub>R</sub>	θ <sub>x</sub> =0°, θ <sub>y</sub> =0°		-	1.5	2.5	ms	
	T <sub>F</sub>			-	3.5	5.5		
White Variation		W	x=0, y=0	75	-	-	%	
Viewing Angle	Horizontal	θ <sub>x-</sub> + θ <sub>x+</sub>	CR ≥ 10	150	170	-	Deg.	
	Vertical	θ <sub>y-</sub> + θ <sub>y+</sub>		140	160	-		
Viewing Angle	Horizontal	θ <sub>x-</sub> + θ <sub>x+</sub>	CR ≥ 5	160	178	---	Deg.	
	Vertical	θ <sub>y-</sub> + θ <sub>y+</sub>		150	170	---		

## 5. Block Diagram

### 5.1 Main Board

715G5265M01000004I

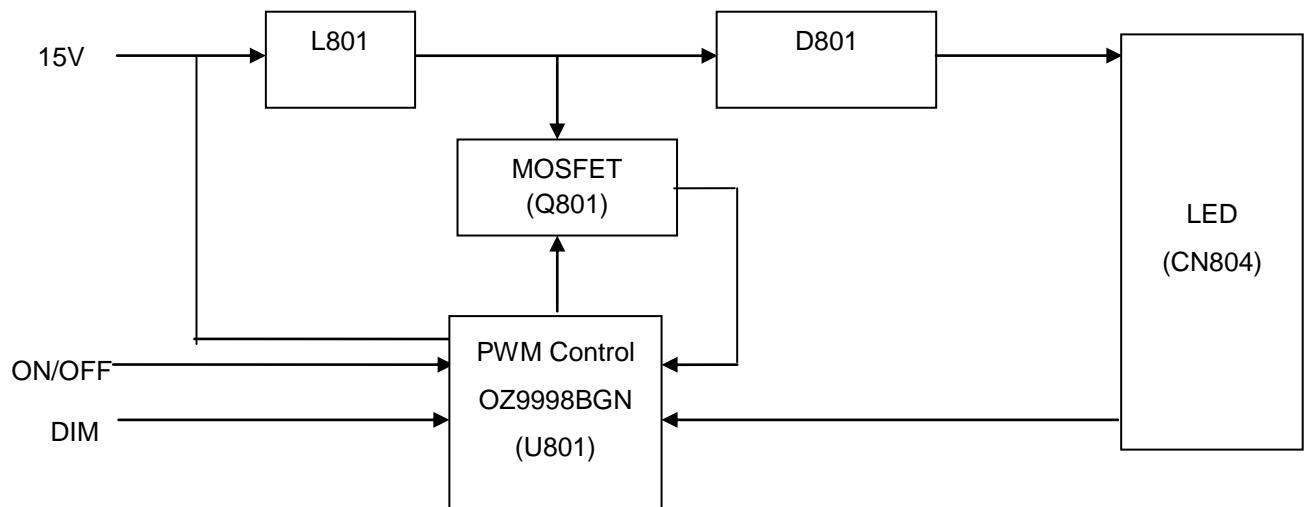
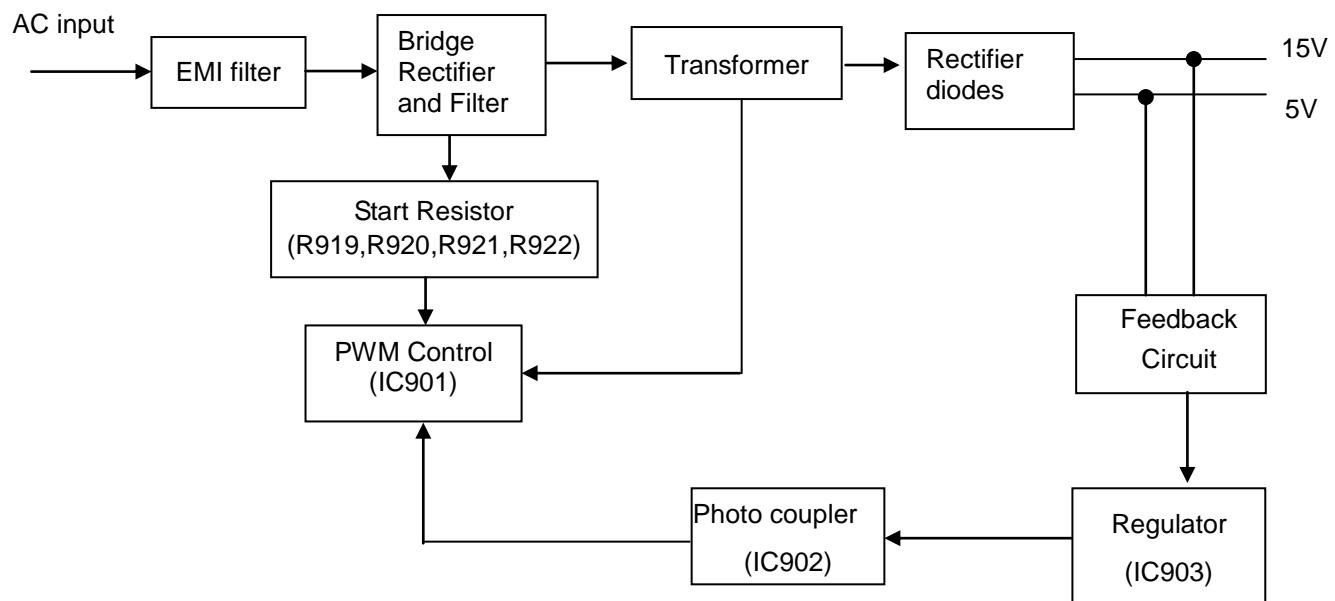
## TSUMU18TR6 SCHEMATIC



TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	Size
G5265-M0B-000-AOC-1-111022	e960Swn	A
Key Component	TPV MODEL	Rev
01.Top	e960Swn	F
Date	PCB NAME	称爹
Thursday, September 08, 2011	715GG5265-M0B-000-004K	<称爹>
	Sheet	2 of 6

## 5.2 Power Board

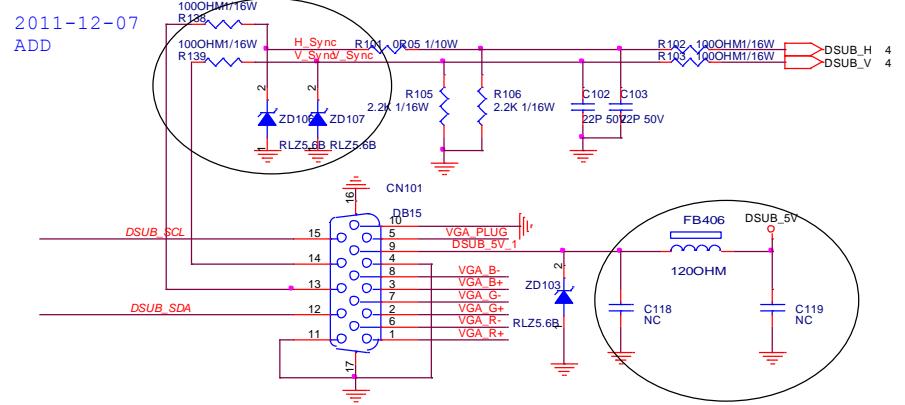
715G4452P02002001M



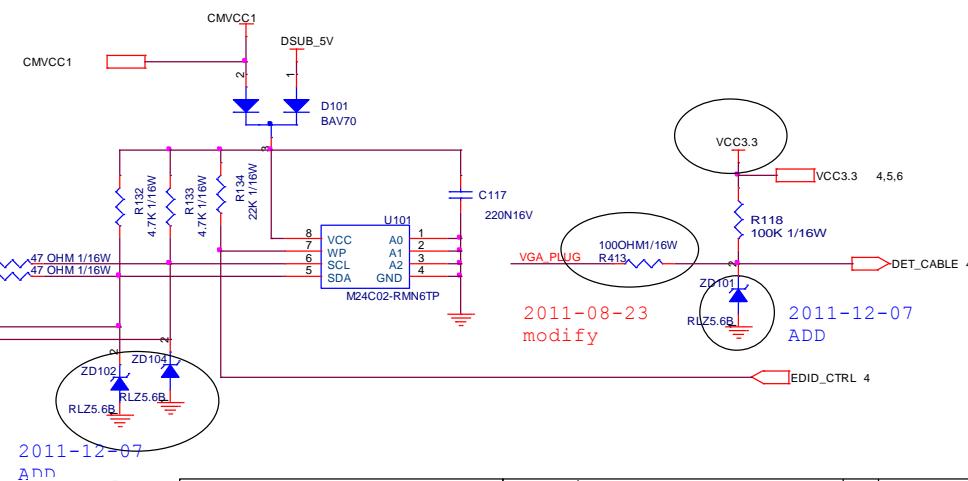
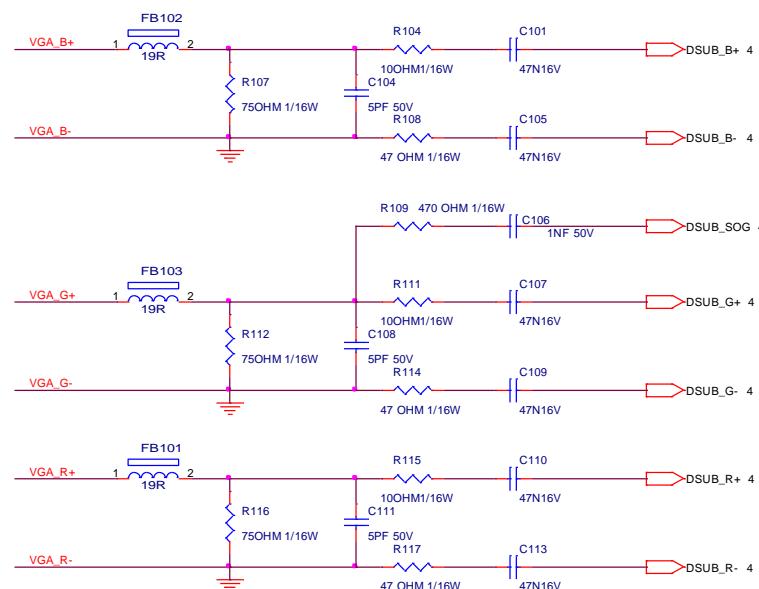
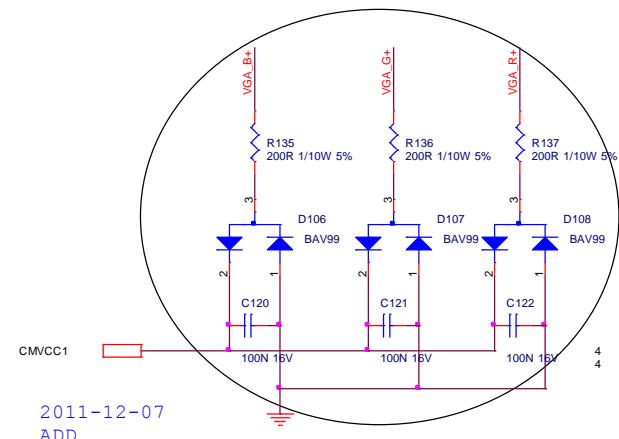
## 6. Schematic

### 6.1 Main Board

715G5265M01000004I

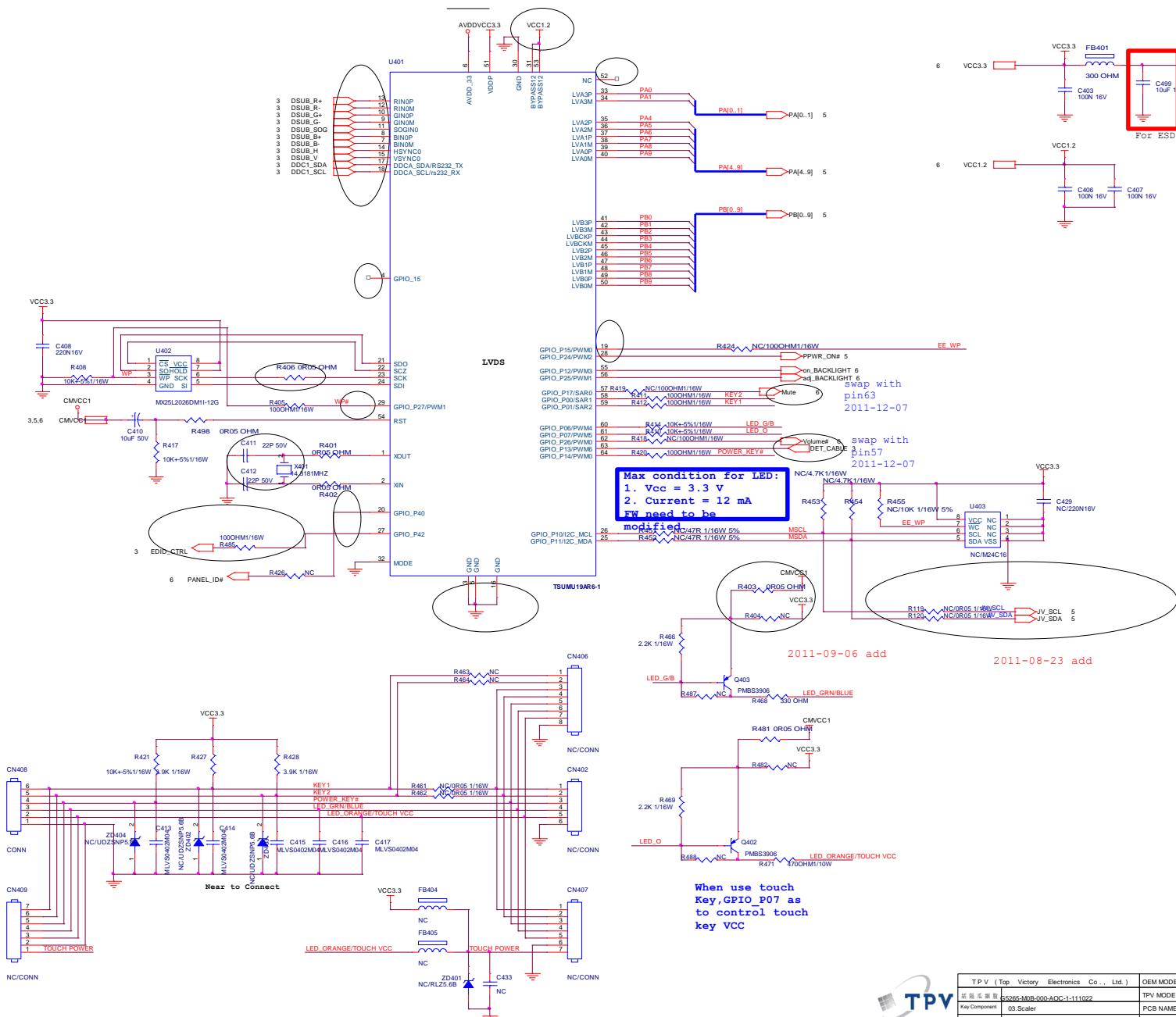


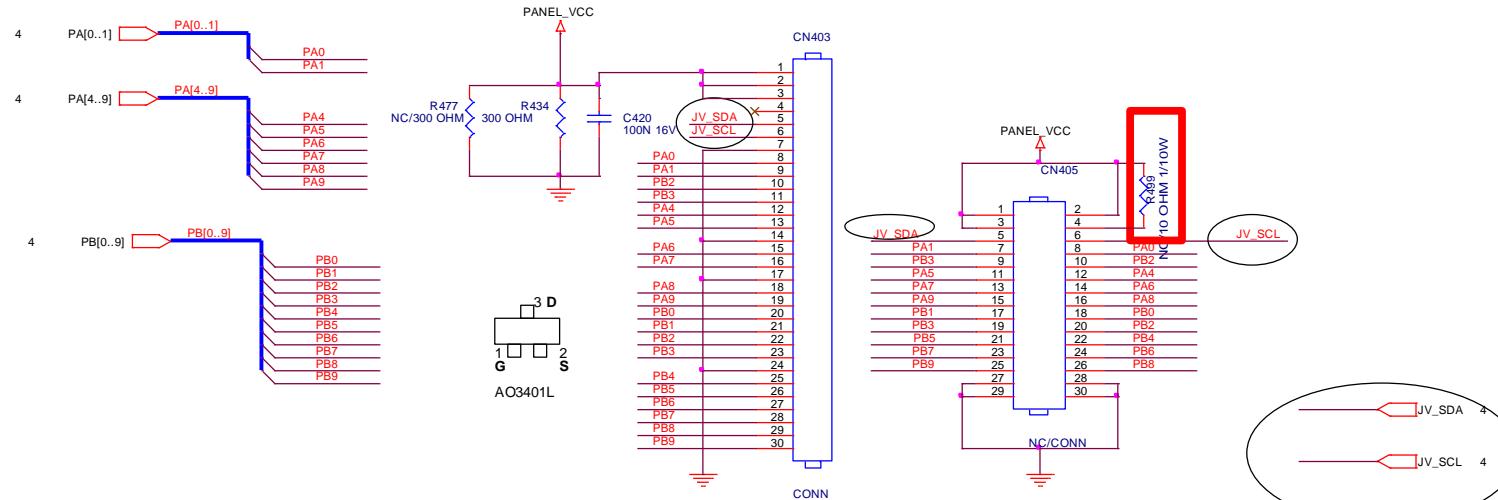
GND POWER DGND



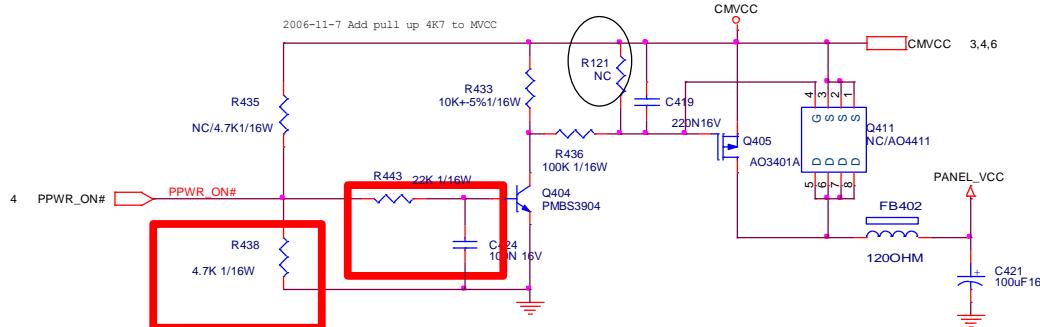
TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	Size	B
拓普瓦电子	e960Swn		
G5265-M0B-000-AOC-1-11022	TPV MODEL	e960Swn	Rev F
Key Component	PCB NAME	715G5265-M0B-000-004K	称多
Date	Sheet	3 of 6	<称多>
Tuesday, January 10, 2012			





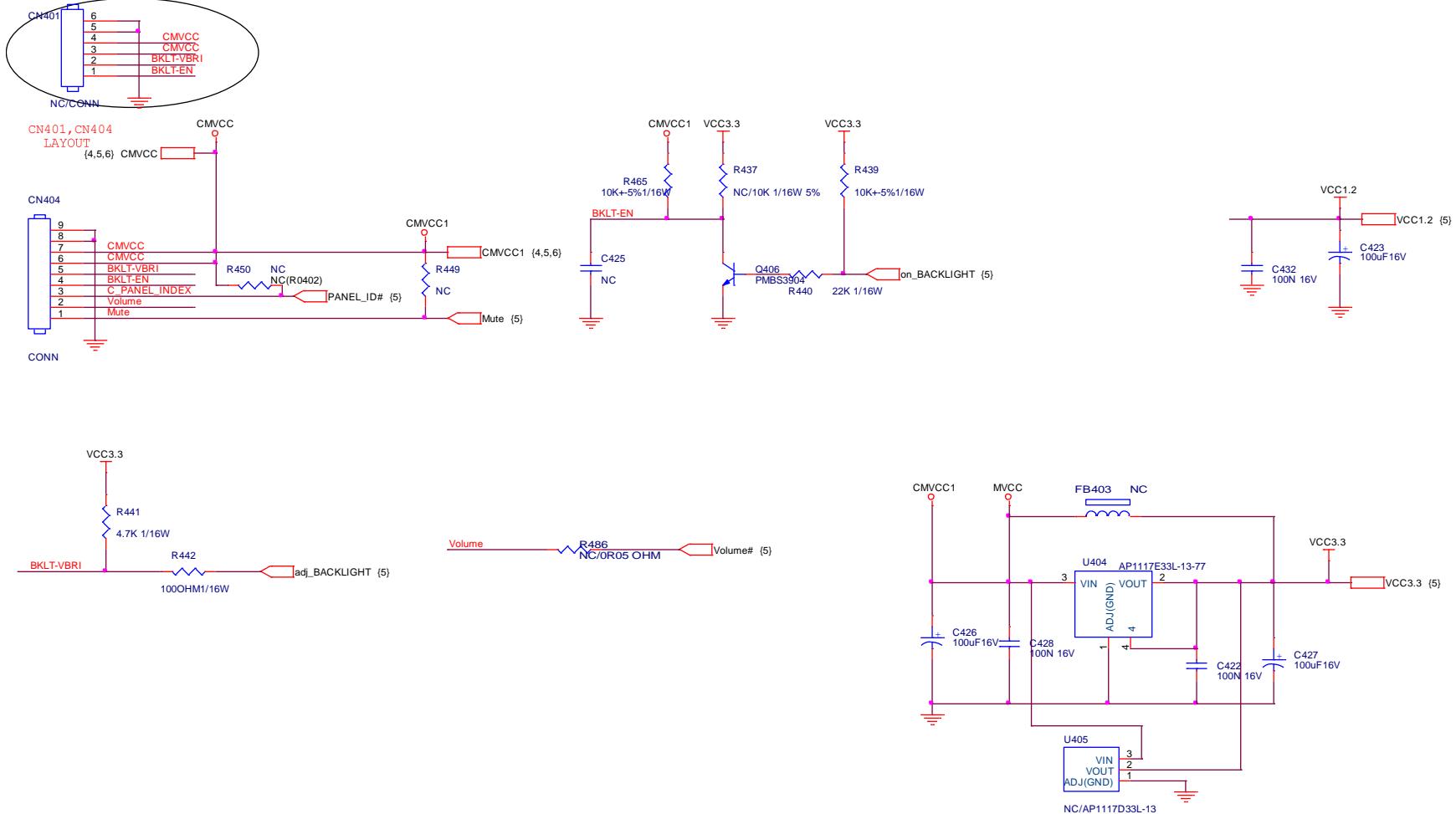


2011-08-23 add



2011-08-23 add

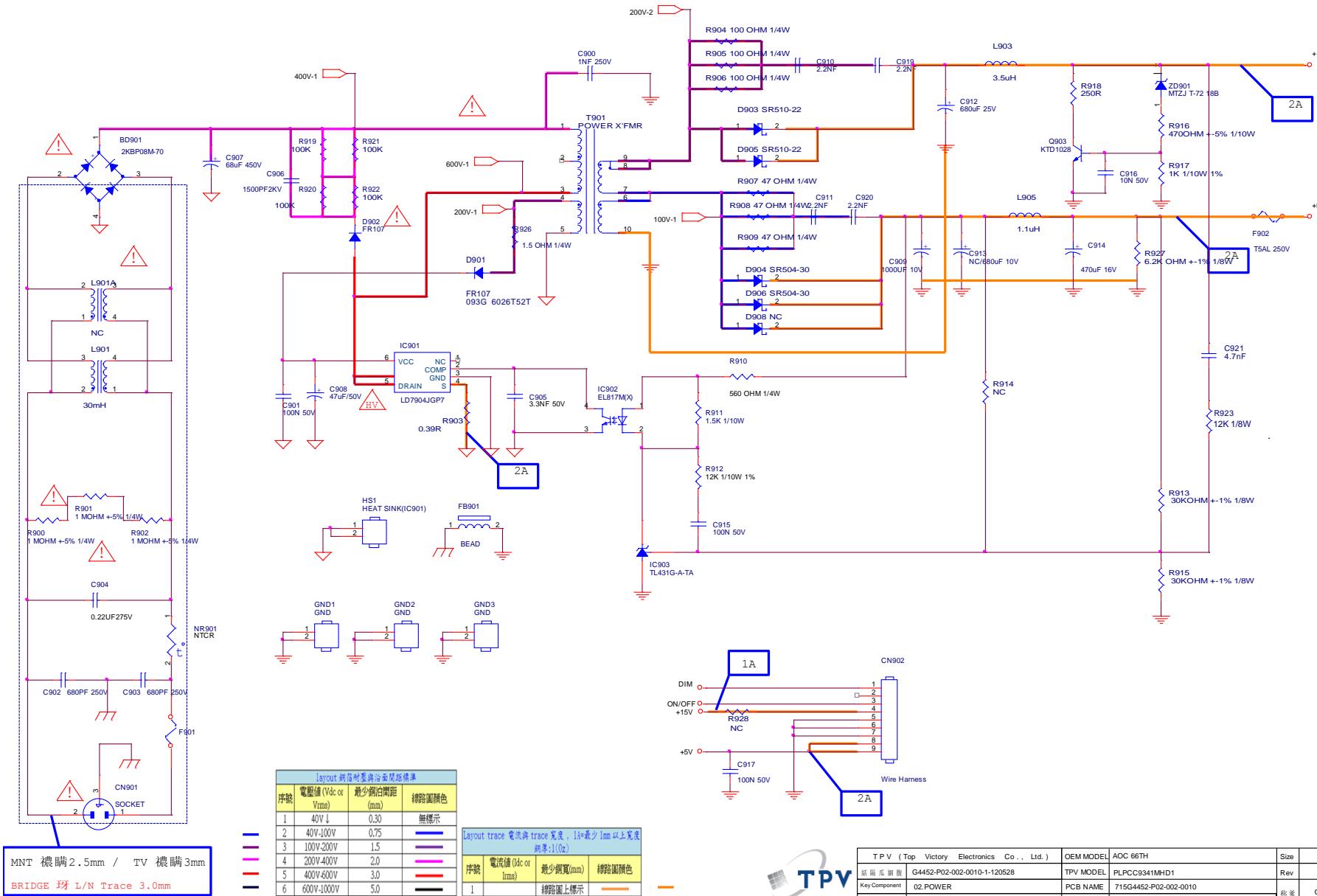
TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	e960Swn	Size	B
基板編號 G5265-M0B-000-AOC-1-111022	TPV MODEL	e960Swn	Rev	F
Key Component Q4, Output	PCB NAME	715G5265-M0B-000-004K		
Date Thursday, October 27, 2011	Sheet	5 of 6	称爹	<称爹>

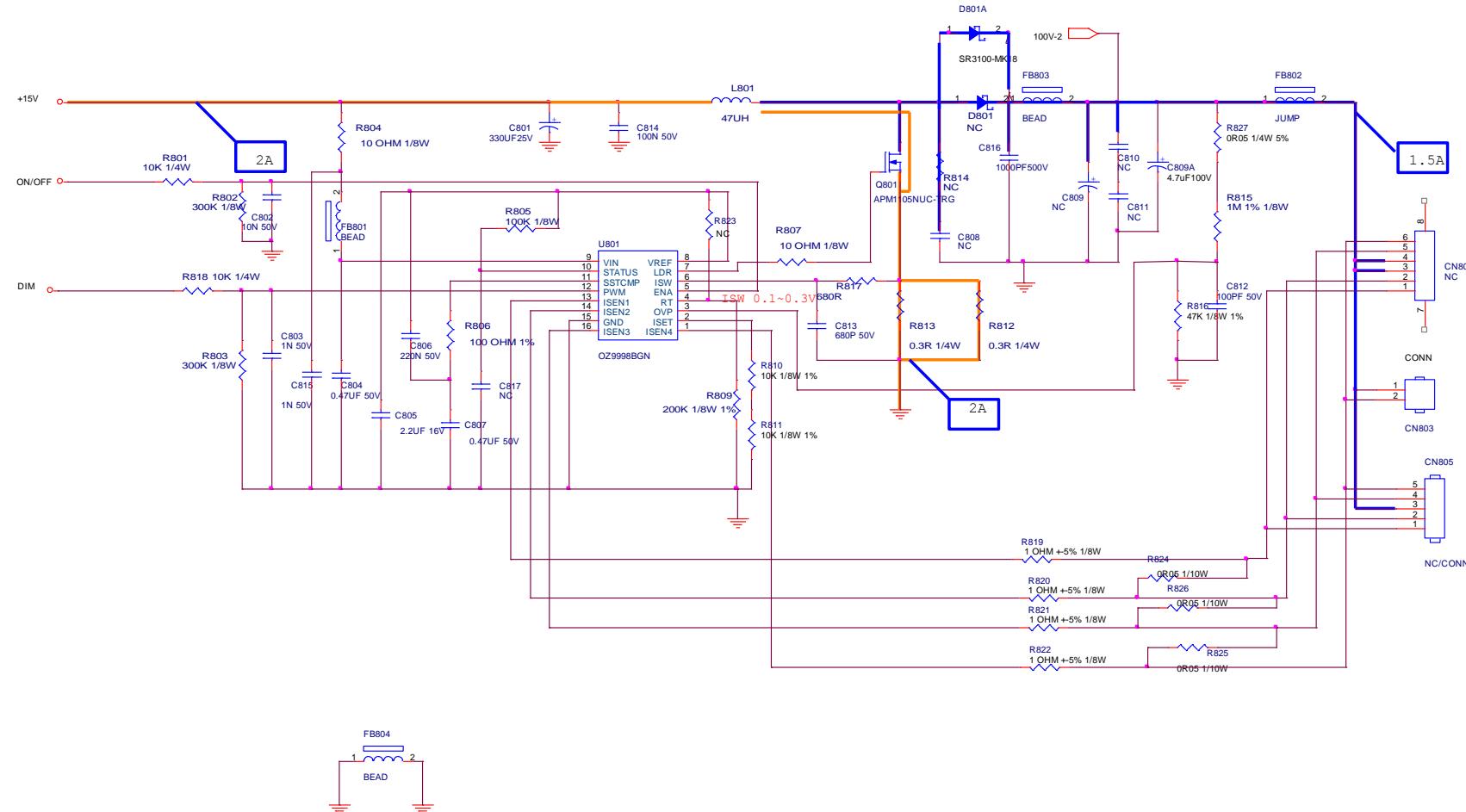


TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	e960Swn	Size	B
絔隔瓜網膜 G5265-M0B-000-AOC-1-11022	TPV MODEL	e960Swn	Rev	F
Key Component 05.Power	PCB NAME	715G5265-M0B-000-004K		
Date Saturday, October 22, 2011	Sheet	6 of 6	称爹	<称爹>

## 6.2 Power Board

### 715G4452P02002001M

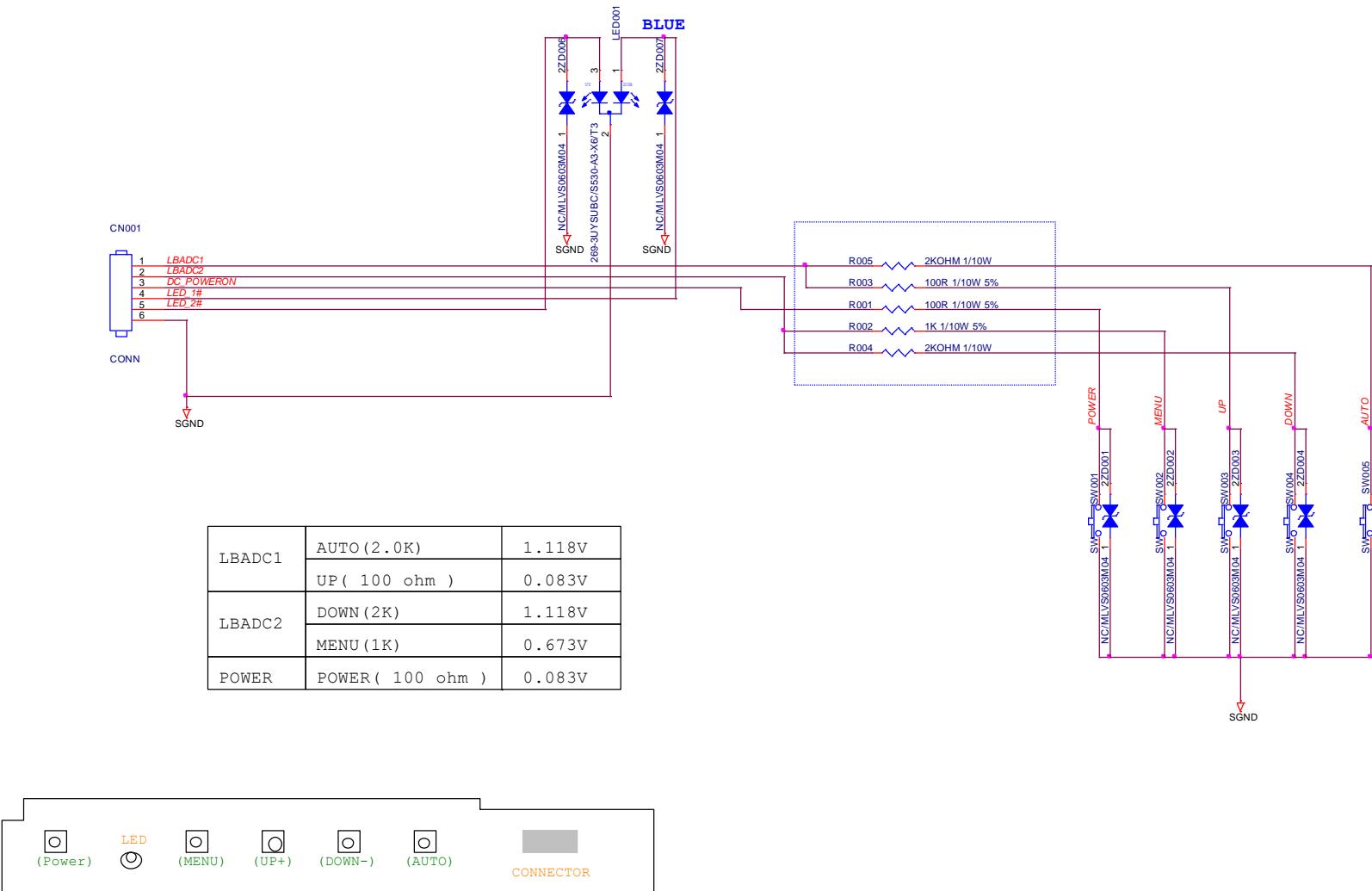




TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	AOC 66TH	Size	Custom
話固瓜網股 G4452-P02-002-0010-120528	TPV MODEL	PLPCC9341MHD1	Rev	1
Key Component 03.CONVERTER	PCB NAME	715G4452-P02-002-0010	称	ODM MODEL
Date Friday, June 08, 2012	Sheet	3 of 3		

## 6.3 Key Board

715G5357K03000001M

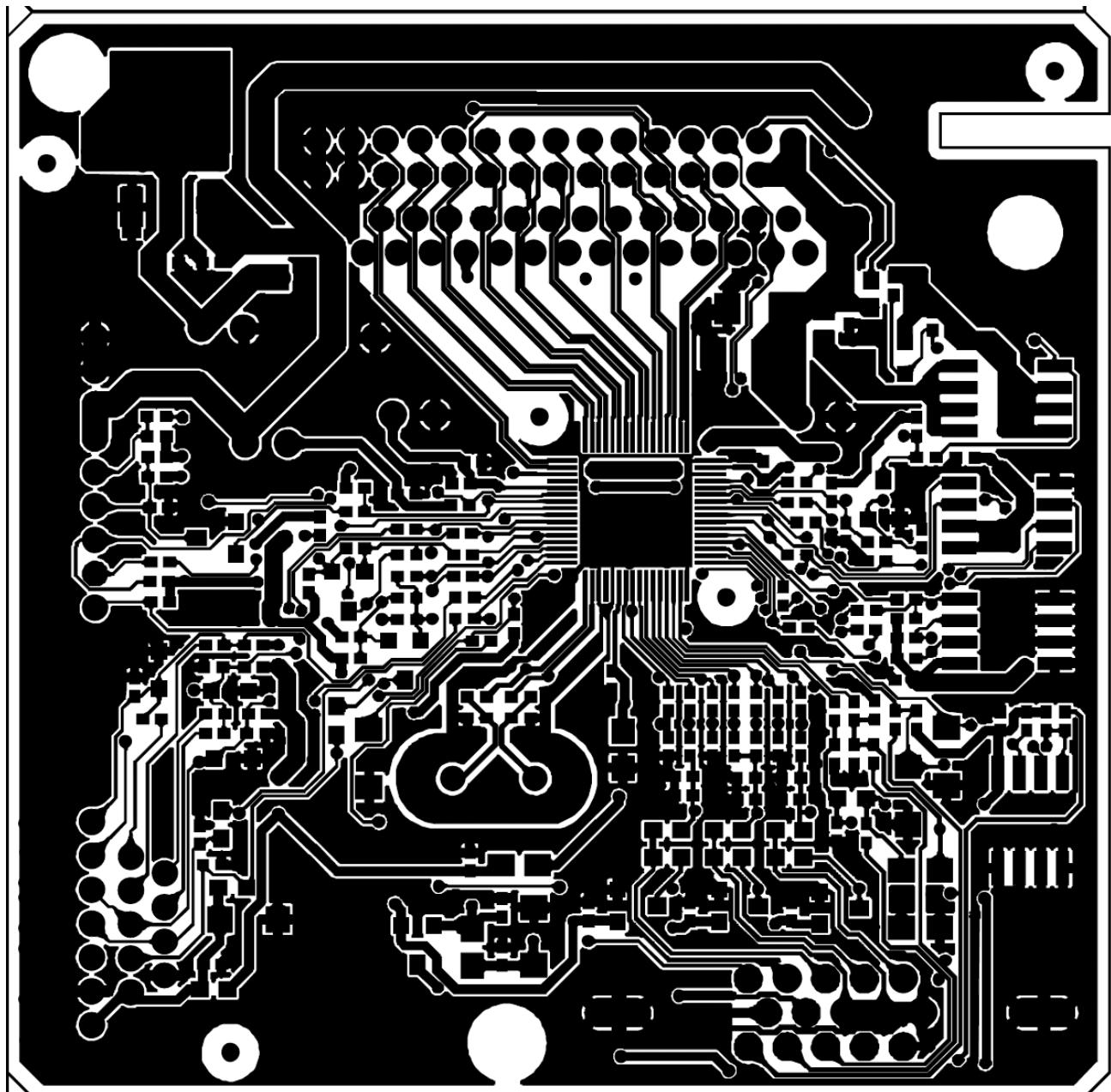


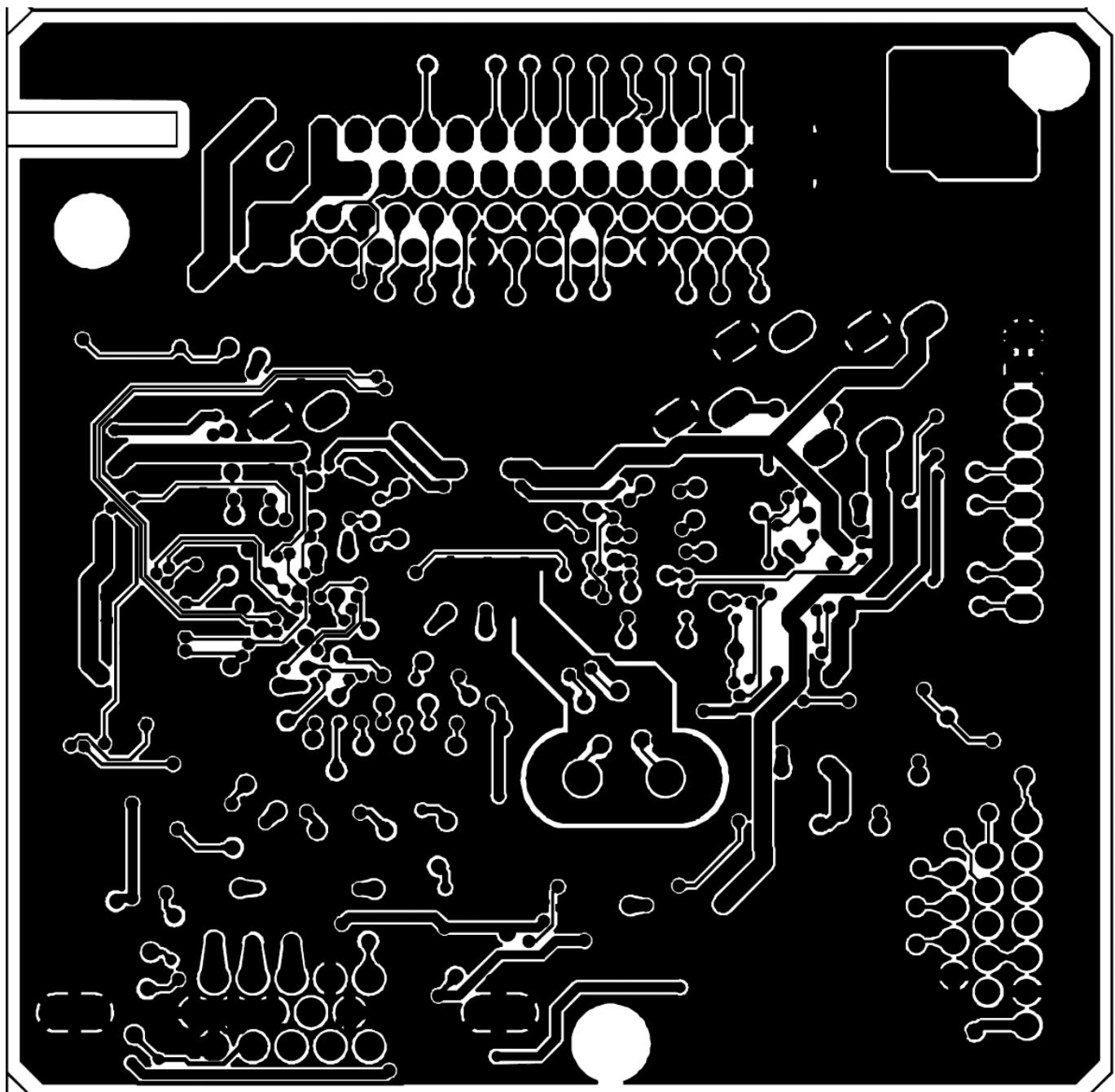
TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	Size	B
结缘瓜网腹 G5357-K0D-000-0010	TPV MODEL e2460Swg	Rev	D
Key Component 2.0.key	PCB NAME 715G5357-K0D-000-0010		
Date Tuesday, January 17, 2012	Sheet 1 of 2	称	称

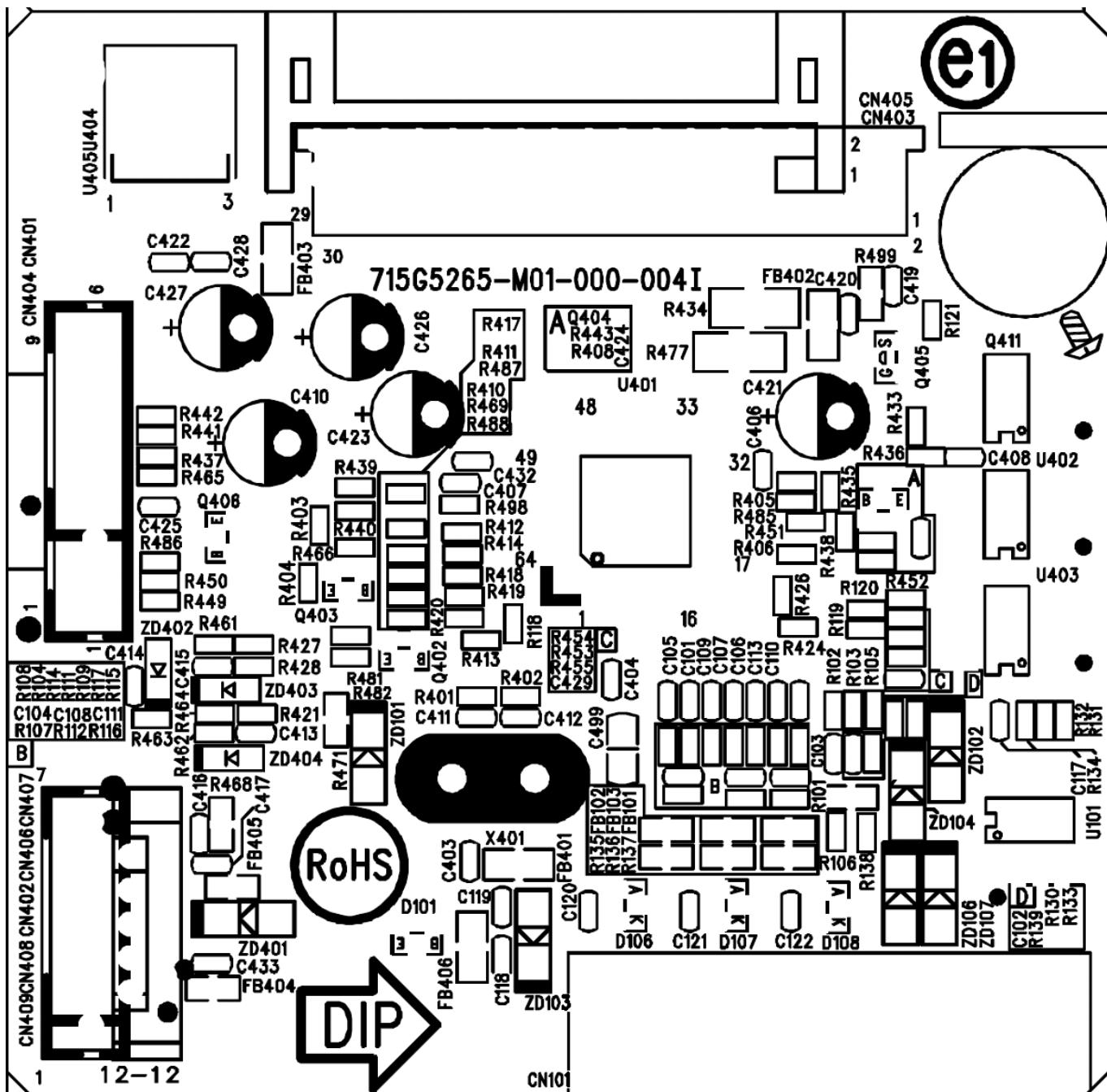
## 7. PCB Layout

### 7.1 Main Board

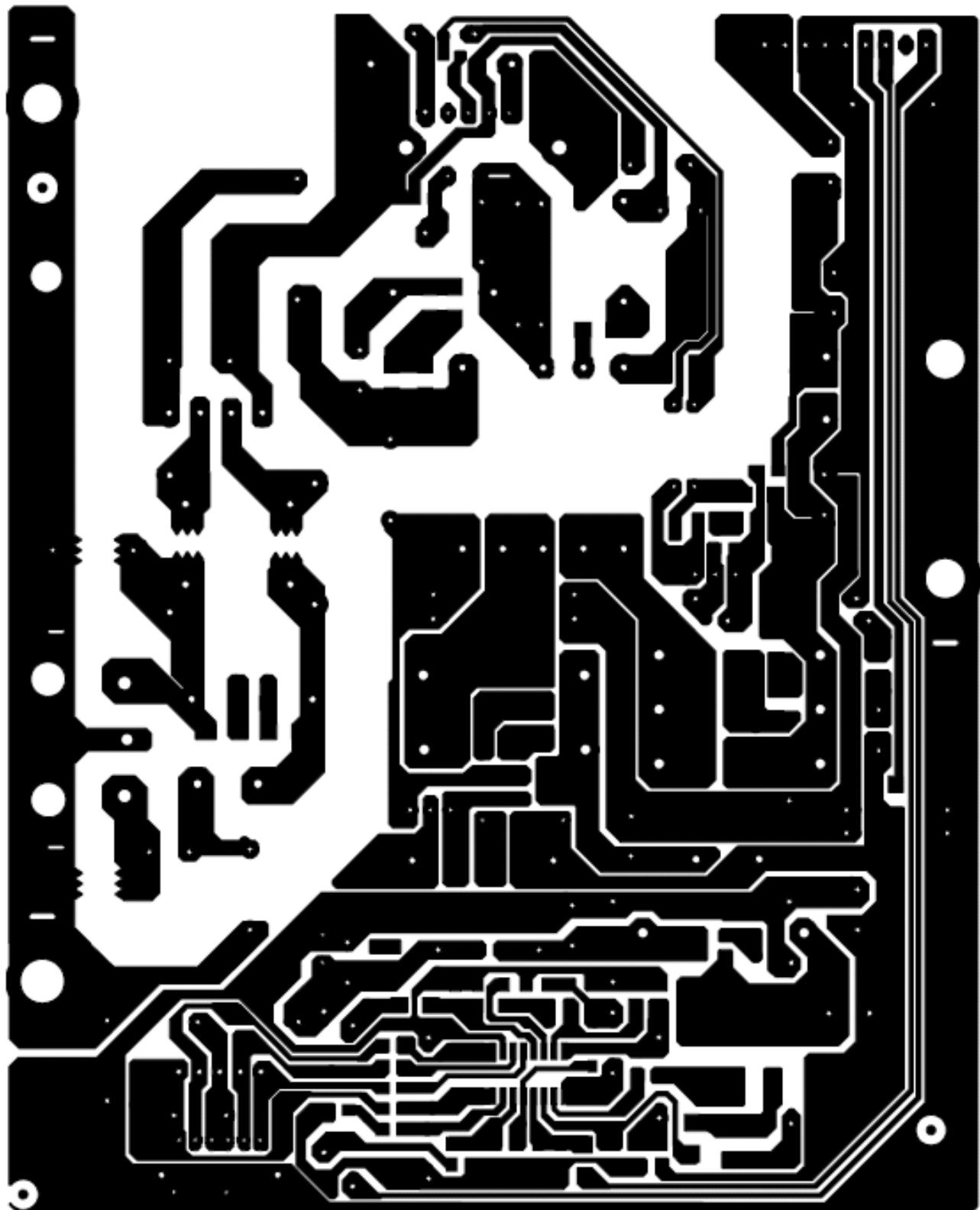
715G5265M01000004I



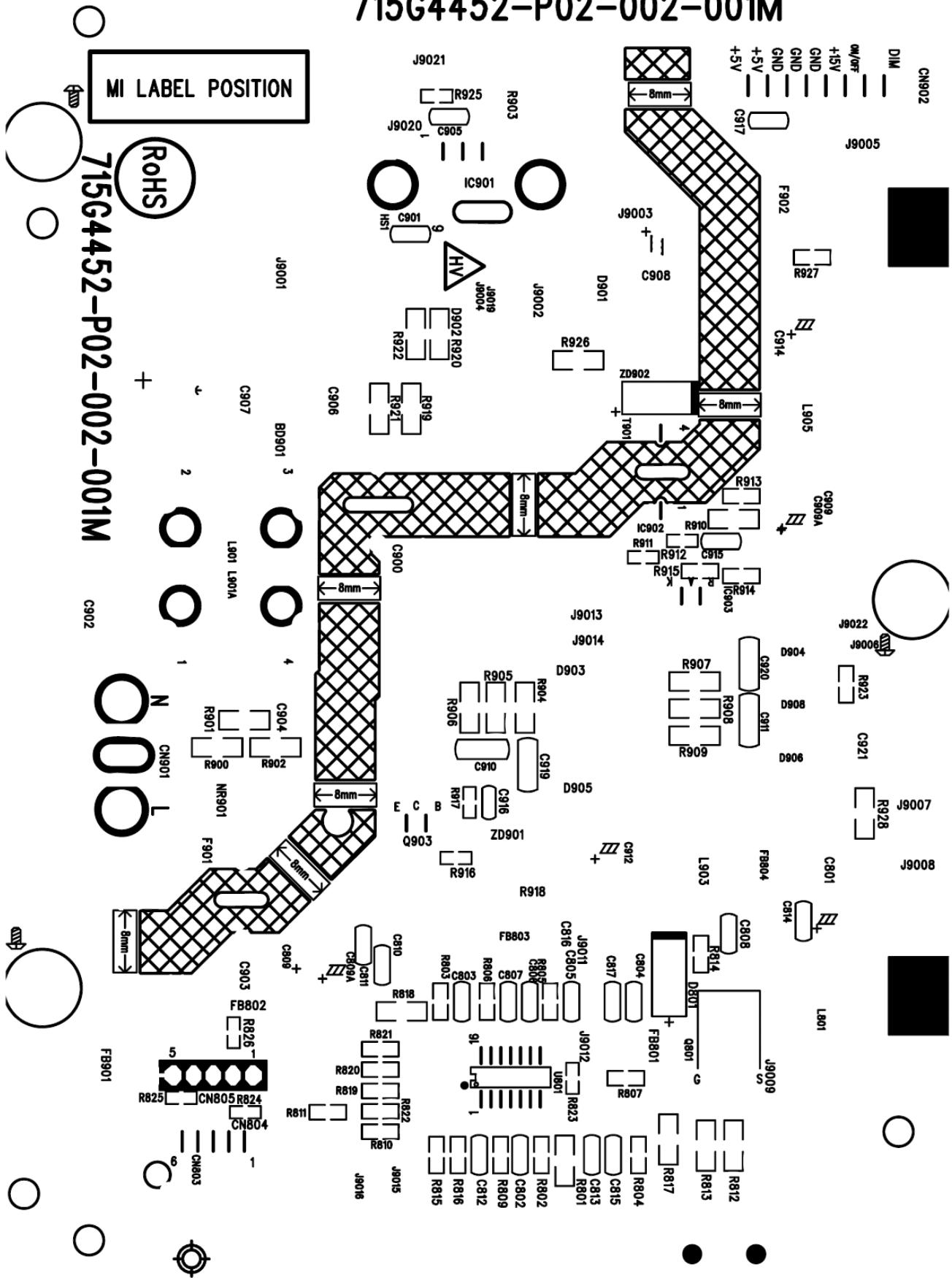


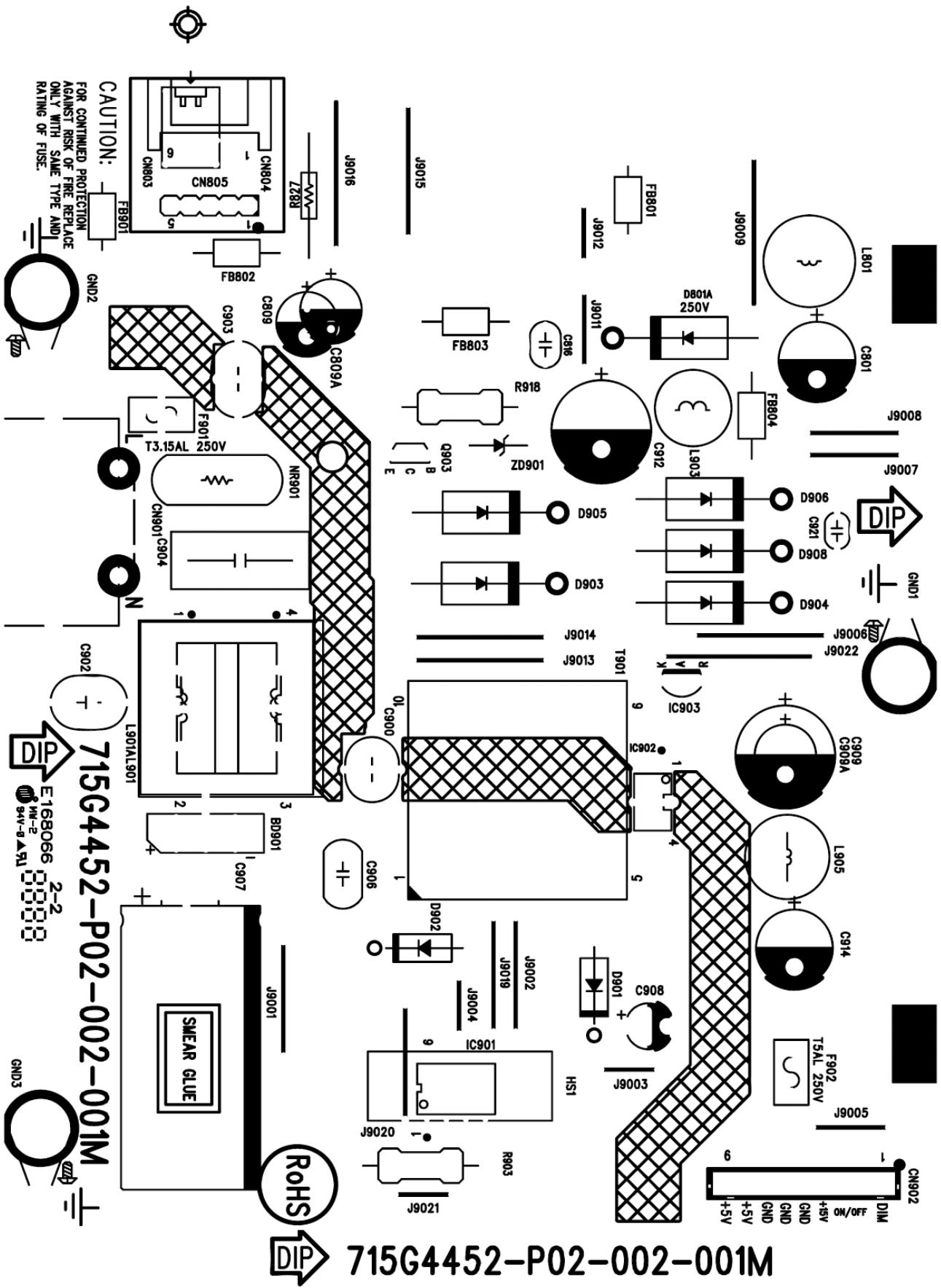


7.2 Power Board  
715G4452P02002001M



715G4452-P02-002-001M

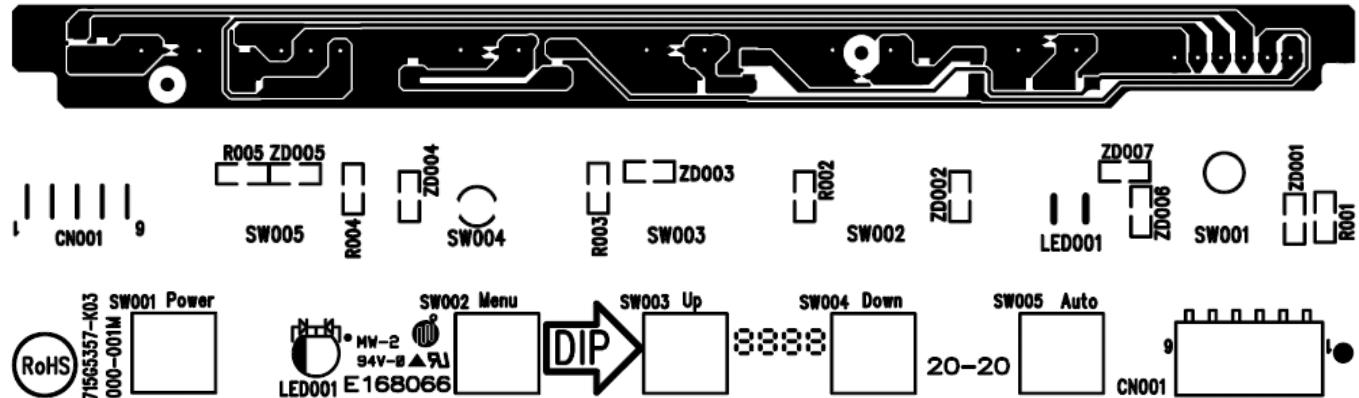




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## 7.3 Key Board

715G5357K03000001M



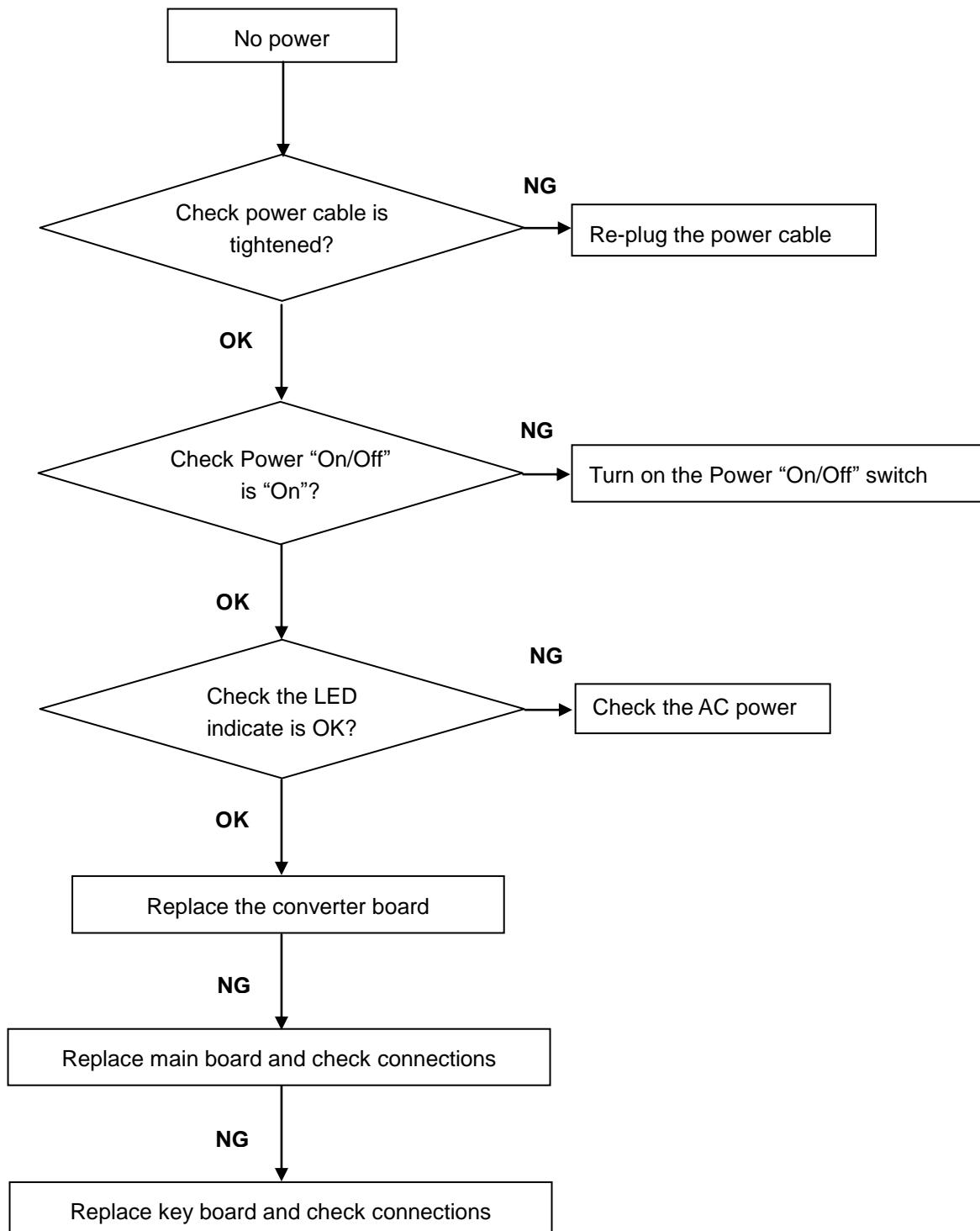
## **8. Maintainability**

### **8.1 Equipments and Tools Requirement**

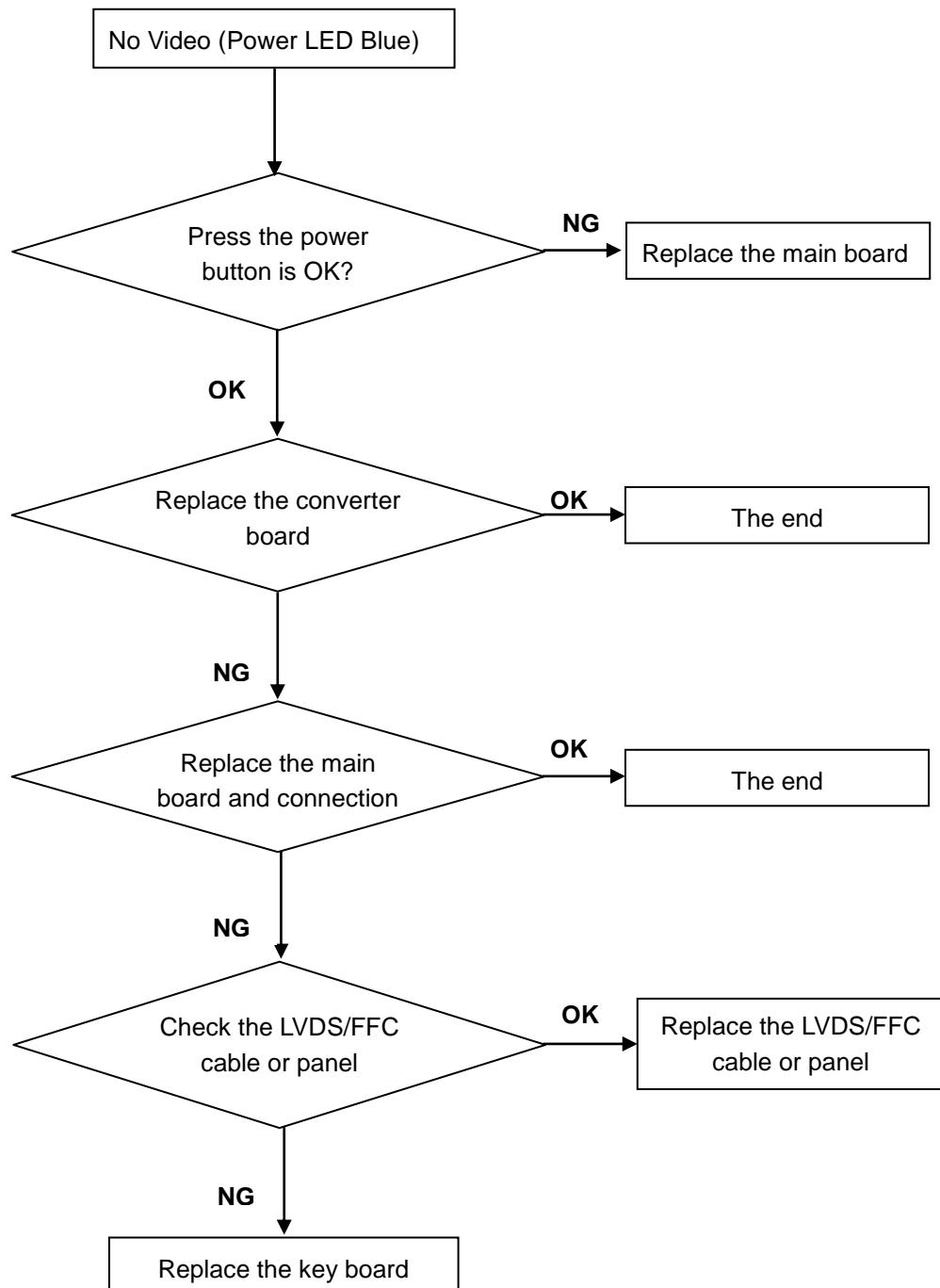
1. Voltmeter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with an IBM Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

## 8.2 Trouble Shooting

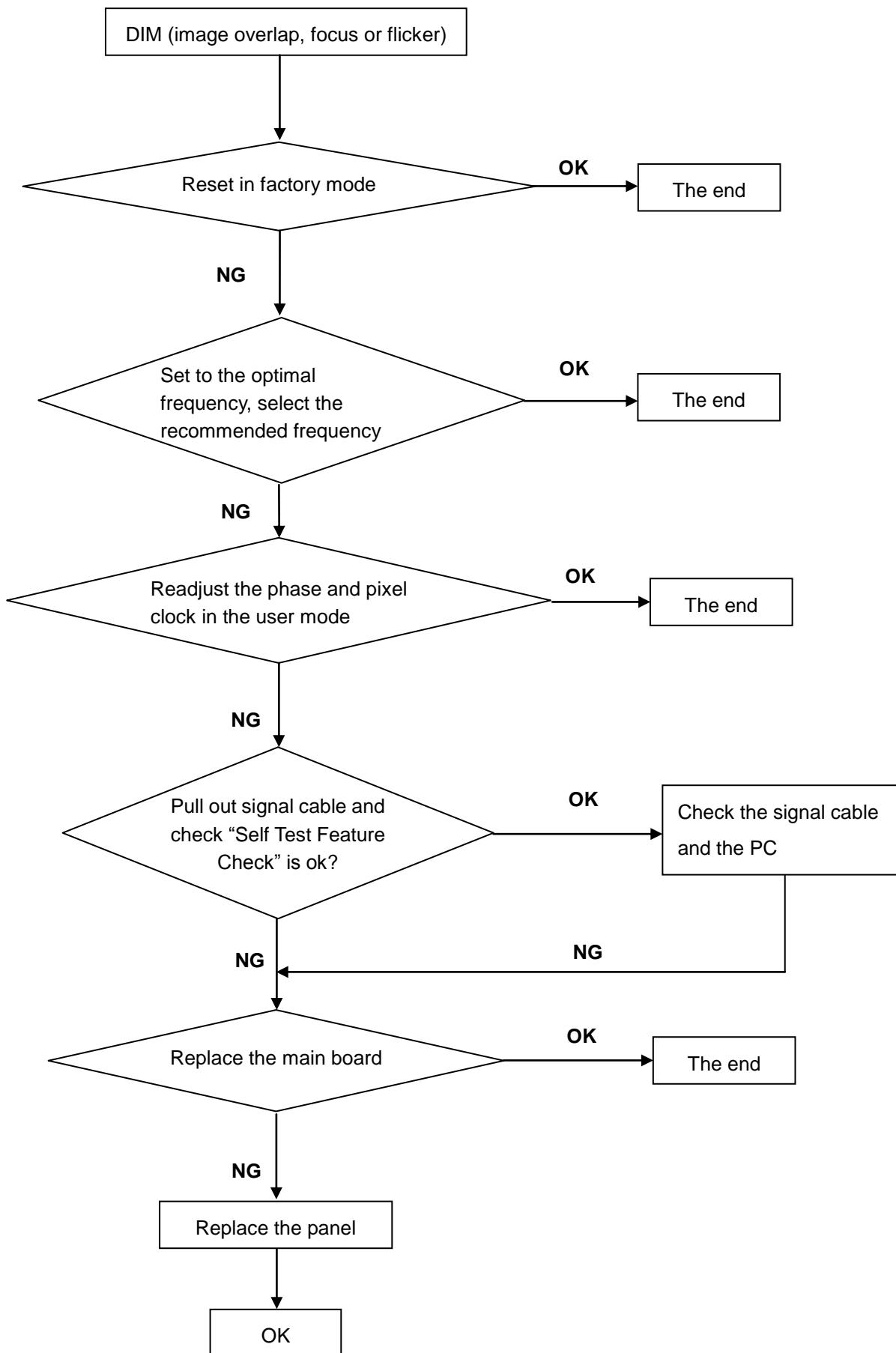
### 1. No Power



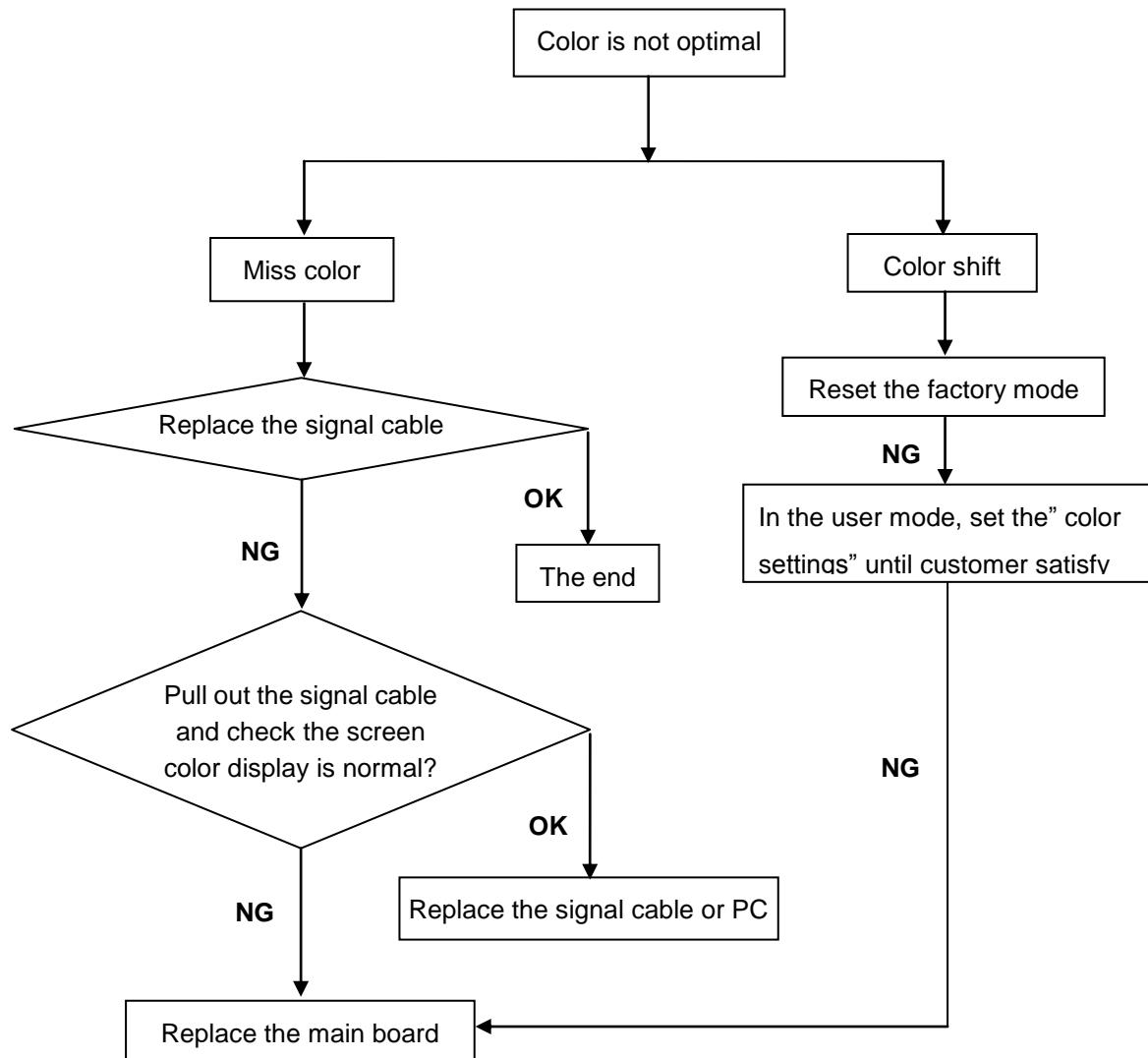
## 2. No Video (Power LED Blue)



### 3. DIM



#### 4. Color is not optimal



## 9. White- Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding white balance adjustment.

How to setting MEM channel you can reference to chroma 7120 user guide or simpl use “SC” key and “NEXT” Key to modify xyY value and use “ID” key to modify the TEXT description Following is the procedure to do white-balance adjust .

2. Setting the color temp. you want

A. MEM.CHANNEL 3 Warm (6500K):

Warm color temp. parameter is  $x = 313 \pm 20$ ,  $y = 329 \pm 20$

B. MEM.CHANNEL 4 Normal (7300K):

Normal color temp. parameter is  $x = 301 \pm 20$ ,  $y = 317 \pm 20$

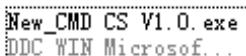
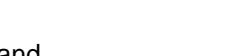
C. MEM.CHANNEL 9 Cool (9300K):

Cool color temp. parameter is  $x = 283 \pm 20$ ,  $y = 297 \pm 20$

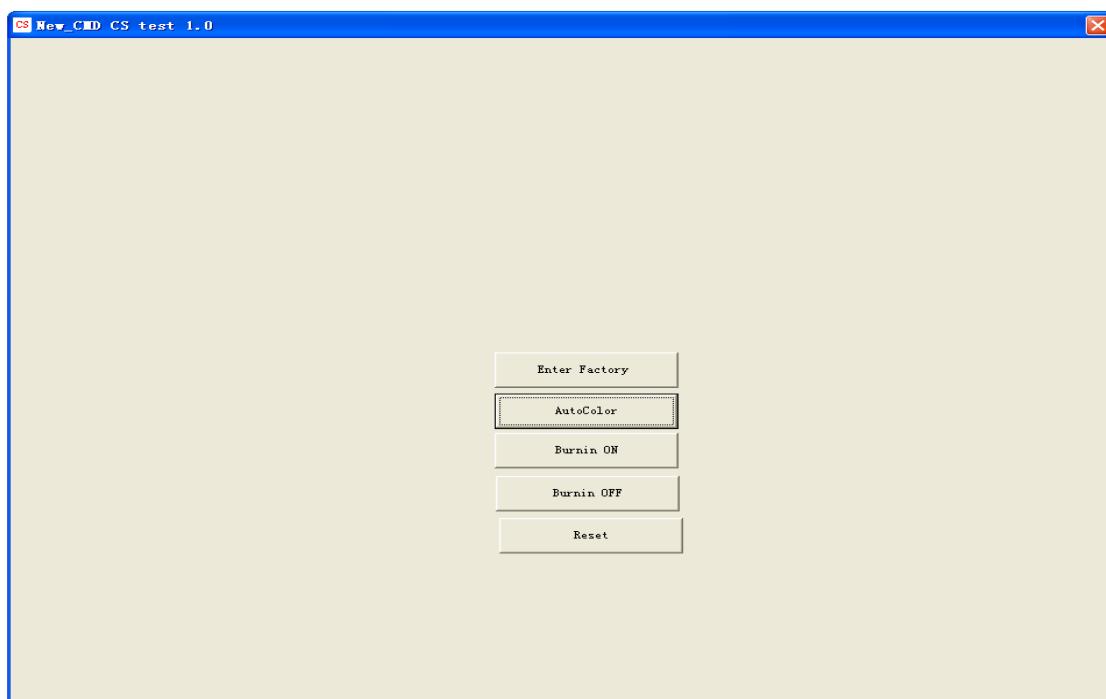
D. MEM.CHANNEL 10 (sRGB color):

sRGB color temp. parameter is  $x = 313 \pm 20$ ,  $y = 329 \pm 20$

3. Enter into the factory mode

A. USE the tool       and

choose "Enter Factory" You will enter into the factory mode



B. Press the MENU button, Pull out the power cord, then plug the power cord. Then the factory OSD will be at the left top of the panel.

4. Gain adjustment:

Move cursor to “-F-” and press MENU key

A. Adjust Warm (6500K) color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM.channel to Channel 3 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show  $x = 313 \pm 20$ ,  $y = 329 \pm 20$
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance = $100\pm 2$

B. Adjust Normal (7300K) color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM.channel to Channel 4 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show  $x = 301 \pm 20$ ,  $y = 317 \pm 20$
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance = $100\pm 2$

C. Adjust Cool (9300K) color-temperature

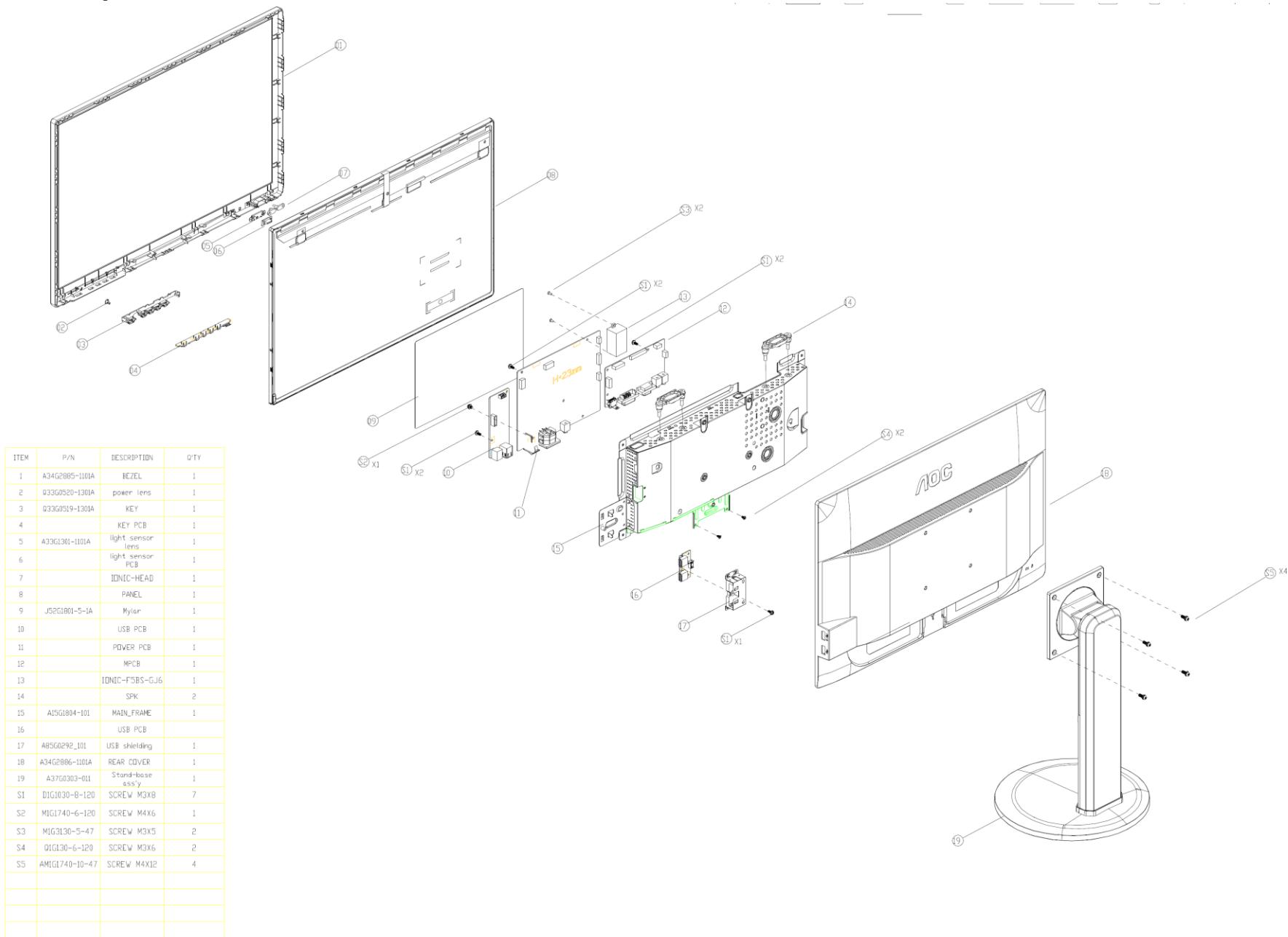
1. Switch the Chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM. Channel to Channel 9 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show  $x = 283 \pm 20$ ,  $y = 297 \pm 20$
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance = $100\pm 2$

D. Adjust sRGB color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM.channel to Channel 10 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show  $x = 313 \pm 20$ ,  $y = 329 \pm 20$
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance = $100\pm 2$

E. Turn the Power-button off to quit from factory mode.

## 10. Monitor Exploded View



## 11. BOM List

Note: The parts information listed below are for reference only, and are subject to change without notice. Please go to <http://cs.tpv.com.cn/hello1.asp> for the latest information.

### E2060Sw

#### T9CMUA7CBGACNNE

Location	Part No.	Description	Remark
	040G 58162435A	MANUAL P/N LABEL	
	052G 2191 A	PAPER TAPE	
E08902	089G 725GAA DB	D-SUB CABLE 1500mm	
E08901	089G417A15N IS	POWER CORD	
ECN804	095G8014 6DE45	HARNESS 6P(CI1406)-6P(2008) 140	
	0D1G1030 6120	screw	
	0M1G1140 6120	screw	
	708GA028XWPH01	40(1790)-XWP	
E750	750GBM195FGK13N000	LCD M195FGE-L20 C1 NH CMI	
	AM1G1740 10125	SCREW	
	AM1G1740 10225 CR3	SCREW	
	H15G00746010GH	MAINFRAME	
	H40G 45762413B	P/N LABEL FOR BASE	
	H40G000261598A	FEATURE-POP LABEL INDIA	
	H40G020N61553A	RATING LABEL E2060Sw PRC APD TW KO	
	H44GA0281010TW	CUSHION	
	H44GA0282010TW	CUSHION	
	H44GA02861501A00HX	ARTWORK CARTON E2060SW CH+INDIAN	
	H70G22C161503D	CD MANUAL 60th	
	KEPCCHA6	KEY BOARD	
	PLPCCA341MHD1	ADAPTER BOARD	
	Q33G0519ABJ 1S0130	KEY	
	Q33G0520 1 1C0100	LENS_POWER	
	Q34G7495ABJ 3S0130	REAR_COVER	
	Q34G7498ABJ 2S0100	STAND	
	Q34G7512ABJ 1S0130	BASE	
	Q34G7631AEDA1S0101	BEZEL	
	Q37G02490150ML	HINGE ASS'Y	
	Q40G000162473A	CARTON LABEL+BARCODE FOR 3	
	Q45G8801M08A0100BX	MANUAL PE BAG	
	Q45G990161940500BX	PROTECT BAG	
M05203	Q52G100204500A00HB	AL FOIL	
M05202	Q52G100204500A00HB	AL FOIL	
M05201	Q52G100204500A00HB	AL FOIL	

	Q52G1801MNT162BFLT	INSULATING SHEET	
ECN403	S89G179T30N22	FFC CABLE 30P 150mm 1.0MM	
	H40G000261553A	TCO'05 EPA LABEL	
	Q50G 4 10	TIE (Y1900221)	
	756GHCCB0BV0020001	MAIN BOARD-CBPCCUAACH1	
U402	056G2233501	FLASH MX25L2026DM1I-12G 2Mb SOP-8	
SMTCC-U402	100GAMMA005W11	MCU ASSY-056G2233501	
CN408	033G3802 6B Y	CONN 6PIN 2.0	
CN404	033G3802 9B Y	CONNECTOR 9P 2.0	
CN403	033G801930F CH L	FFC CONN 1.0mm 30P R/A 34mm 6mm	
CN101	088G 35315F HD	D-SUB CONN 15P BLUE - R/A	
X401	093G 2253B YC	CRYSTAL 14.3181MHZ/20PF/49US	
	709G52650HM001	COMSUMPTIVE ASSY	
	H40G 45762429A	LABEL	
LED001	381G00122YG0GP	LED yellow/green GP32032M/P310-ZY-30	
CN001	395G820H06D539	HARNESS 6P(SANW)-6P(2008) 280mm	
	709G53570HM001	COMSUMPTIVE ASSY	
GND1	009G6005 1	GND TERMINAL	
GND2	009G6005 1	GND TERMINAL	
IC902	056G 139 9	IC EL817M(X) photocoupler DIP-4	
IC901	056G 379205	AC/DC LD7904JGP7 DIP-6	
NR901	061G 58100 X1	NTCR 10 20% 3.6W	
C904	063G107K224 UM	X2 CAP 0.22uF K 275VAC	
C907	067G 43Z68015L	EC 68uF M 450V RGT 18*31.5mm	
L901	073G 174 65 H2	LINE FILTER 30mH MIN	
L903	073G 253 91 L	CHOKE COIL 3.5UH 10% CC-015367HF,VOC,HF	
L905	073G 253191 H	IND CHOKE 1.1uH DADON	
L801	073G 253242 CP	CHOKE COIL 47UH 10% 2.5A L040462-6	
CN901	087G 501 32 HC	AC SOCKET 3P DB-14-05 R/A	
BD901	093G 50460517	BRIDGE 2KBP08M-70 2A 800V KBP 80A	
D903	093G 60335	DIODE SR515 5A/150V DO-201AD	
D904	093G 60519	DIODE SR560-MK23 5A/60V DO-27 SECOS	
CN804	311GW200A06ABX	WAFER 2.0mm 6P	
D801A	393G0060A0300S	SCHOTTKY SR3100-MK18 3A 100V DO-201AD	
CN902	395G082509TW02	HARNESS 9P-9P 120mm	
	709G4452 HM001	COMSUMPTIVE ASSY	
	H40G 45762429A	LABEL	
T901	S80GL19P39V1HF	X'FMR -----	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
C410	067G 3051007PB	EC 10UF 20% 50V 5*11 CD263	

C426	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C427	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C423	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C421	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
R003	061G0603101 JT	RST CHIP 100R 1/10W 5% TZAI YUAN	
R001	061G0603101 JT	RST CHIP 100R 1/10W 5% TZAI YUAN	
R002	061G0603102 JT	RST CHIP 1K 1/10W 5% TZAI YUAN	
R004	061G0603202 JT	RST 0603 2K 5% 1/10W	
R005	061G0603202 JT	RST 0603 2K 5% 1/10W	
ZD007	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD006	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD004	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD005	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD002	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD003	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD001	093G 64 59 SU	ESD MLVS0603M04 0603	
	055G 23524	WELDING FLUX WITHOUT PB	
	Q51G 6 4509	GLUE_RTV	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
U801	056G 700 11	LED DRIVER OZ9998BGN-A1-0-TR SOP-16	
Q801	057G 763141	MOSFET APM1105NUC-TRG 16A 100V TO-252-3	
R925	061G0603100 JF	RST CHIPR 10 OHM 5% 1/10W FENGHUA	
R917	061G06031001FT	RST CHIP 1K 1/10W 1%	
R911	061G0603152 JF	RST CHIPR 1.5KOHM +-5% 1/10W FENGHUA	
R916	061G0603471 JT	RST CHIPR 470OHM +-5% 1/10W TZAI YUAN	
R912	061G06037501FT	RST CHIP 7K5 1/10W 1%	
R804	061G0805100 JF	RST CHIPR 10 OHM +-5% 1/8W FENGHUA	
R807	061G0805100 JF	RST CHIPR 10 OHM +-5% 1/8W FENGHUA	
R815	061G08051004FT	RST CHIP R 1 MOHM +-1% 1/8W	
R806	061G0805101 JF	RST 0805 100R 5% 1/8W	
R805	061G0805104 JY	RST CHIPR 100KOHM 1/8W YAGEO	
R821	061G0805109 JF	RST CHIPR 1 OHM +-5% 1/8W FENGHUA	
R820	061G0805109 JF	RST CHIPR 1 OHM +-5% 1/8W FENGHUA	
R819	061G0805109 JF	RST CHIPR 1 OHM +-5% 1/8W FENGHUA	
R822	061G0805109 JF	RST CHIPR 1 OHM +-5% 1/8W FENGHUA	
R810	061G08051202FT	RST CHIP 12K 1/8W 1%	
R923	061G0805123 JF	RST CHIPR 12KOHM +-5% 1/8W FENGHUA	
R809	061G08052003FT	RST CHIP 200K 1/8W 1%	
R915	061G08053002FF	RST CHIPR 30KOHM +-1% 1/8W FENGHUA	

R913	061G08053002FF	RST CHIPR 30KOHM +-1% 1/8W FENGHUA	
R802	061G0805304 JF	RST CHIPR 300KOHM +-5% 1/8W FENGHUA	
R803	061G0805304 JF	RST CHIPR 300KOHM +-5% 1/8W FENGHUA	
R816	061G08054702FT	RST CHIP 47K 1/8W 1%	
R811	061G08055101FT	RST CHIP 5K1 1/8W 1%	
R927	061G0805622 JT	RST CHIPR 6K2 +-5% 1/8W TZAI YUAN	
R904	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R905	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R906	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R801	061G1206103 JF	RST CHIPR 10KOHM +-5% 1/4W FENGHUA	
R818	061G1206103 JF	RST CHIPR 10KOHM +-5% 1/4W FENGHUA	
R920	061G1206104 JT	RST CHIPR 100KOHM +-5% 1/4W TZAI YUAN	
R921	061G1206104 JT	RST CHIPR 100KOHM +-5% 1/4W TZAI YUAN	
R922	061G1206104 JT	RST CHIPR 100KOHM +-5% 1/4W TZAI YUAN	
R919	061G1206104 JT	RST CHIPR 100KOHM +-5% 1/4W TZAI YUAN	
R900	061G1206105 JF	RST CHIPR 1 MOHM +-5% 1/4W FENGHUA	
R902	061G1206105 JF	RST CHIPR 1 MOHM +-5% 1/4W FENGHUA	
R901	061G1206105 JF	RST CHIPR 1 MOHM +-5% 1/4W FENGHUA	
R926	061G1206159 JT	RST CHIP R 1.5ohm 1/4W +/-5%	
R813	061G1206308 JT	RST 1206 0.3R 5% 1/4W	
R812	061G1206308 JT	RST 1206 0.3R 5% 1/4W	
R908	061G1206470 JT	RST CHIPR 47 OHM +-5% 1/4W TZAI YUAN	
R907	061G1206470 JT	RST CHIPR 47 OHM +-5% 1/4W TZAI YUAN	
R909	061G1206470 JT	RST CHIPR 47 OHM +-5% 1/4W TZAI YUAN	
R817	061G1206681 JF	RST 1206 680R 5% 1/4W FENGHUA	
R910	061G1206911 JT	RST 1206 910R 5% 1/4W	
C916	065G060310332K Y	CAP CHIP 0603 10N 50V X7R +/-10%	
C812	065G080510131J F	CAP CHIP 0805 100PF J 50V NPO	
C815	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C803	065G080510232K Y	CAP CHIP 0805 1N 50V X7R +/-10%	
C802	065G080510332K Y	CAP CHIP 0805 10N 50V X7R +/-10%	
C814	065G080510432K 3	CAP CHIP 0805 100N 50V X7R +/-10%	
C917	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C915	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C901	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C806	065G080522432K Y	CAP CHIP 0805 220N 50V X7R +/-10%	
C805	065G080522512K 3	CAP CHIP 0805 2U2 16V X7R +/-10%	
C905	065G080533232K A	CAP 0805 3.3NF 10% 50V X7R	
C807	065G080547432K 3	CAP 0805 470NF 10% 50V X7R	
C804	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	

C813	065G080568131J	Y	CAP CHIP 0805 680P 50V NP0 +/-5%	
C910	065G120622272K	Y	CER 1206 2N2 500V X7R 10%	
C920	065G120622272K	Y	CER 1206 2N2 500V X7R 10%	
C919	065G120622272K	Y	CER 1206 2N2 500V X7R 10%	
C911	065G120622272K	Y	CER 1206 2N2 500V X7R 10%	
ZD902	093G 39S 38	T	PTZ 9.1B	
	709G4452 HS001		COMSUMPTIVE ASSY	
SW003	077G603S AI HJ		TACT SWITCH AI 2PIN SEALED	
SW004	077G603S AI HJ		TACT SWITCH AI 2PIN SEALED	
SW002	077G603S AI HJ		TACT SWITCH AI 2PIN SEALED	
SW005	077G603S AI HJ		TACT SWITCH AI 2PIN SEALED	
SW001	077G603S AI HJ		TACT SWITCH AI 2PIN SEALED	
E715	715G5357K03000001M		KEY PCB FR1 SS 117*10*1.6MM	
FB802	095G 90 23		JUMP WIRE --	
	709G4452 HA001		COMSUMPTIVE ASSY	
E715	715G4452P02002001M		PWR PCB FR1 CTI>600 SS 152*122*1.6MM	
J9003	095G 90 23		JUMP WIRE --	
J9004	095G 90 23		JUMP WIRE --	
C801	367G215X3314AT		EC 330uF 20% 25V 10*12 RF	
F902	084G 56 5 C		FUSE 5A 250V MST 5A 250V	
J9014	095G 90 23		JUMP WIRE --	
J9022	095G 90 23		JUMP WIRE --	
J9002	095G 90 23		JUMP WIRE --	
Q903	057G 530503	T	2SD1207T	
C908	367G215X4707AT		EC 47uF 20% 50V - 6.3*11mm RG	
D902	093G 6026T52T		CTIFIER DIODE FR107	
J9009	095G 90 23		JUMP WIRE --	
R827	095G 90 23		JUMP WIRE --	
ZD901	093G 39A0852T		GDZJ18B	
C816	065G517K102 2T6921		CAP CER 1000PF K 500V Y5P	
J9016	095G 90 23		JUMP WIRE --	
J9020	095G 90 23		JUMP WIRE --	
J9007	095G 90 23		JUMP WIRE --	
J9006	095G 90 23		JUMP WIRE --	
C921	065G500K4722HT		CAP CER 4.7NF 10% 50V X7R	
J9019	095G 90 23		JUMP WIRE --	
D901	093G 6026T52T		CTIFIER DIODE FR107	
J9021	095G 90 23		JUMP WIRE --	
R918	061G152M25152T	SY	RST MOF 250R 5% 2W	
C914	367G415X4713AT		EC 470uf 20% 16V 10X13 RS	

IC903	056G 563355	Shunt Regu TL431G-A-TA TO-92 42V 150mA	
J9012	095G 90 23	JUMP WIRE - -	
C906	065G 2K152 2T6921	CAP CER 1500pF K 2KV Y5P	
FB801	071G 55 29	FERRITE BEAD	
C903	365G306K6812WR	CAP Y1 680PF 10% 250V Y5P	
J9015	095G 90 23	JUMP WIRE - -	
C809A	067G 4154799LT	EC 4.7UF 20% 100V 8*11.5	
J9005	095G 90 23	JUMP WIRE - -	
FB804	071G 55 29	FERRITE BEAD	
R903	061G152M39852T SY	RST MOF 0.39R 5% 2W	
J9011	095G 90 23	JUMP WIRE - -	
	006G 31500	EYELET	
C912	367G215S6814AT	EC 680UF 20% 25V - 12.5*16 RF	
C900	065G306M10233R	CAP Y1 1NF 20% 250V Y5U	
F901	084G 56 3 C	FUSE 3.15A 250V MST 3.15A 250V	
J9008	095G 90 23	JUMP WIRE - -	
J9013	095G 90 23	JUMP WIRE - -	
C902	365G306K6812WR	CAP Y1 680PF 10% 250V Y5P	
FB803	071G 55 29	FERRITE BEAD	
C909	367G415X1024AT	EC 1000UF 20% 25V 12.5X20 RS 4000 hr RS	
FB901	071G 55 29	FERRITE BEAD	
J9001	095G 90 23	JUMP WIRE - -	
U404	056G 585 4A	LDO AP1117E33G-13 1A 3.3V SOT-223	
U101	056G1133 34 1	EEPROM M24C02-RMN6TP 2Kb SO-8	
U402	056G2233501	FLASH MX25L2026DM1I-12G 2Mb SOP-8	
Q404	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q406	057G 417 4	PMBS3904/PHILIPS-SMT(04)	
Q402	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q403	057G 417 6	PMBS3906/PHILIPS-SMT(06)	
Q405	057G 763940	MOSFET AO3401A SOT-23	
R401	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R402	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R403	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R406	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R481	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R498	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R115	061G0402100 JY	RST CHIPR 10 OHM +-5% 1/16W YAGEO	
R111	061G0402100 JY	RST CHIPR 10 OHM +-5% 1/16W YAGEO	
R104	061G0402100 JY	RST CHIPR 10 OHM +-5% 1/16W YAGEO	
R138	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	

R139	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R485	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R412	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R413	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R411	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R102	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R420	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R103	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R442	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R405	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R417	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R433	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R439	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R421	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R408	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R414	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R465	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R410	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R118	061G0402104 JF	RST CHIPR 100KOHM +-5% 1/16W FENGHUA	
R436	061G0402104 JF	RST CHIPR 100KOHM +-5% 1/16W FENGHUA	
R105	061G0402222 JF	RST CHIPR 2.2KOHM +-5% 1/16W FENGHUA	
R106	061G0402222 JF	RST CHIPR 2.2KOHM +-5% 1/16W FENGHUA	
R469	061G0402222 JF	RST CHIPR 2.2KOHM +-5% 1/16W FENGHUA	
R466	061G0402222 JF	RST CHIPR 2.2KOHM +-5% 1/16W FENGHUA	
R443	061G0402223 JF	RST CHIPR 22KOHM 5% 1/16W FENGHUA	
R440	061G0402223 JF	RST CHIPR 22KOHM 5% 1/16W FENGHUA	
R134	061G0402223 JF	RST CHIPR 22KOHM 5% 1/16W FENGHUA	
R427	061G0402392 JY	RST CHIPR 3.9KOHM 5% 1/16W YAGEO	
R428	061G0402392 JY	RST CHIPR 3.9KOHM 5% 1/16W YAGEO	
R117	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R130	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R108	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R131	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R114	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R109	061G0402471 JF	RST CHIPR 470 OHM 5% 1/16W FENGHUA	
R132	061G0402472 JF	RST CHIPR 4.7KOHM +-5% 1/16W FENGHUA	
R133	061G0402472 JF	RST CHIPR 4.7KOHM +-5% 1/16W FENGHUA	
R441	061G0402472 JF	RST CHIPR 4.7KOHM +-5% 1/16W FENGHUA	
R438	061G0402472 JF	RST CHIPR 4.7KOHM +-5% 1/16W FENGHUA	
R116	061G0402750 JF	RST CHIPR 75 OHM +-5% 1/16W FENGHUA	

R112	061G0402750 JF	RST CHIPR 75 OHM +-5% 1/16W FENGHUA	
R107	061G0402750 JF	RST CHIPR 75 OHM +-5% 1/16W FENGHUA	
R101	061G0603000 JF	RST CHIPR MAX 0R05 1/10W FENGHUA	
R136	061G0603201 JF	RST CHIP 200R 1/10W 5% FENGHUA	
R135	061G0603201 JF	RST CHIP 200R 1/10W 5% FENGHUA	
R137	061G0603201 JF	RST CHIP 200R 1/10W 5% FENGHUA	
R468	061G0603331 JF	RST CHIPR 330OHM +-5% 0603	
R471	061G0603471 JF	RST CHIPR 470OHM +-5% 1/10W FENGHUA	
R434	061G1206301 JF	RST CHIPR 300 OHM +-5% 1/4W fenghua	
C106	065G040210232K A	CAP 0402 1NF 10% 50V X7R	
C407	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C120	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C420	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C428	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C422	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C121	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C424	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C122	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C404	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C406	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C403	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C432	065G040210412K A	CAP CHIP 0402 100nF K 16V X7R	
C102	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C411	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C103	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C412	065G040222031J Y	CAP CHIP 0402 22P 50V NP0 +/-5%	
C408	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C419	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C117	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C101	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C107	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C109	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C113	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C110	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C105	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C104	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C108	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C111	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C499	065G080510615K T	CHIP 10uF 16V X5R 0805	
FB406	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	

FB402	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB401	071G 56V301 M	CHIP BEAD 0805 300R 25% 700mA	
FB101	071G 59K190 M	CHIP BEAD 0603 19R/500mA	
FB102	071G 59K190 M	CHIP BEAD 0603 19R/500mA	
FB103	071G 59K190 M	CHIP BEAD 0603 19R/500mA	
D107	093G 64 33	SWITCHING BAV99 0.2A 85V SOT-23	
D106	093G 64 33	SWITCHING BAV99 0.2A 85V SOT-23	
D108	093G 64 33	SWITCHING BAV99 0.2A 85V SOT-23	
D101	093G 64 42 PP	BAV70 SOT-23	
ZD106	093G 39GA01 T	RLZ5.6B	
ZD101	093G 39GA01 T	RLZ5.6B	
ZD104	093G 39GA01 T	RLZ5.6B	
ZD102	093G 39GA01 T	RLZ5.6B	
ZD103	093G 39GA01 T	RLZ5.6B	
ZD107	093G 39GA01 T	RLZ5.6B	
C413	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C414	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C417	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C415	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C416	093G 64S501 SU	ESD MLVS0402M04 4V 402	
U401	356G0562064B20	SCALER TSUMU19AR6-1 LQFP-64	
	709G52650HS001	COMSUMPTIVE ASSY	
E715	715G5265M01000004I	MAIN PCB FR4 DS 65X64X1.6MM	
	H52G 2191 1	美纹胶带	
	H52G1701 1	MESH PRINTTING_PAPER	

